

An ethnographic case study of the linguistic
landscape of an award-winning Māori immersion
early childhood education centre

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*“Te Reo – enshrines the ethos, the life principle of a people.
It helps give sustenance to the heart, mind, spirit and psyche.
It is paramount.”*

Pere & Nicholson (1997, p. 10)

Abstract

The linguistic landscape is the visibility and salience of any given language within a geographically defined area (Landry & Bourhis, 1997). It reflects the strength of the language policy, and influences how languages are perceived and therefore used (Cenoz & Gorter 2006). Increasing the visibility of te reo Māori in New Zealand is a national policy, to honour the Treaty of Waitangi and to contribute to the revitalisation and normalisation of the threatened language. Early childhood education is viewed as one of the cornerstones of the revitalisation of te reo Māori in New Zealand, therefore the visibility of te reo Māori in an early childhood centre is of significance to study. This research was conducted in an award-winning Māori immersion early childhood centre and included the environments of the centre, the home and online, creating a language ecology. The aim was to describe and understand the policies and practices of language and technology use in each environment, and then to understand how those environments interacted. Photos were taken of the displays and semi-structured interviews were conducted with the Head of Centre, teachers and parents. The findings showed that the linguistic landscape served a greater function than just indicating vitality, policy and use. There were unseen processes that were occurring, aimed at strengthening wellbeing, achievement, togetherness, tikanga, normalisation, identity, and belonging. The linguistic landscape was a visual representation of the processes occurring that strengthened the needs of the people, through the interactions between the environments within the language ecology. Interactions between the environments strengthened and supported the normalisation of te reo Māori as an oral language, both within and beyond the centre.

Dedication

To my son.

My tama-iti,
may I always surround you in Aro-ha
as you grow in an infinite direction.

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1: Introduction

As I, the researcher, walk into the Māori immersion early childhood centre there is an immediate sensation that I am entering a Māori world. The planting of tree ferns, the archways along the path reflecting the structure of a wharenui ¹, and lastly the ultimate confirmation that this is indeed a Māori world, a whiteboard at the entrance written completely in te reo Māori². The language on the walls is an indication of the dominant language within this physical space.

The linguistic landscape is a field of research capturing the visual representation of the languages in a particular setting. Landry and Bourhis (1997, p. 23) describe a linguistic landscape as, “the visibility and salience of languages on public and commercial signs in a given territory or region”. This visibility and salience is an indication of the power and status the language has in the environment (Landry and Bourhis, 1997). This power and status can be linked with language policies. Cenoz and Gorter (2006), conducted a linguistic landscape study within two similar streets in two different countries. They found a strong connection between the linguistic landscape and language status and policy. Interestingly, they also found that the linguistic landscape influenced how languages were being perceived and therefore how languages were being used.

The New Zealand Government’s Māori Language Policy (1999, p. 12) recognises that the visibility of a language is an indicator of policy. The Māori language policy is intended to increase the opportunities to learn, use and improve te reo Māori; this includes fostering a positive attitude towards the Māori language. The visibility of Māori language is an important consideration in revitalising te reo Māori in New Zealand. The Government of New Zealand has a commitment to do this through The Treaty of Waitangi signed in 1840, a treaty agreement between the British Crown and various Māori chiefs. One of the principles of the treaty is “Māori to retain rangatiratanga³ over their resources and taonga⁴ and to have all the privileges of citizenship”. The Māori Language Act 1987 confirmed that under the Treaty of Waitangi active protection of the Māori language, which is viewed as a taonga, is a Government responsibility.

The number of people able to have a basic conversation in te reo Māori has declined by 4.8 percent since the 2006 Census to 125,352 (21.3 percent), according to the most recent New Zealand census (Retrieved from www.stats.govt.nz/census/2013). Ko Aotearoa Tenei (Waitangi Tribunal, 2011), a report into claims concerning New Zealand law and policy affecting Māori culture and identity, suggests that the decline in the number of speakers of te reo Māori may be due to the declining number of enrolments in Māori language Early

¹ Meeting house

² The language of the people of the land

³ Sovereignty

⁴ Treasure/Precious gift

Childhood Education (ECE) centres; despite the increase in enrolments overall in ECE centres. It is important then, that the mainstream ECE centres continue to support the revitalisation of te reo Māori through consciously creating and maintaining visual presence. Research in linguistic landscapes of educational settings, particularly ECE, is an important contribution to the current understanding of maintenance and revitalisation of minority and heritage languages. By analysing good practice of the rich linguistic landscape of a Māori immersion ECE setting, this can be shared as inspiration, not only with other, mainstream ECE centres, but also the homes and communities in which the children belong.

Communication, between the ECE centres and the homes environments, becomes important for creating stronger connections between the environments to support the transmission of te reo Māori. This connection and communication may be greatly facilitated by an increase in technological capabilities for sharing information as suggested by Nicholson (2012).

Māori broadcasting, radio, television, and cyberspace, are seen as important aids in the revitalisation of the language, as they all are able to be present in the home. Māori spoken in the home is the present-day emphasis for the language in the hope of ensuring intergenerational transmission (p. ii).

The environments people are connecting and interacting in are not just the physical, but the virtual too. Technology is becoming a more significant part of the landscape creating a mixed-reality setting, where the physical and the virtual become a multilayered and complex learning environment. Integral components exist beyond what can be observed directly in the physical reality, therefore the online environment must also be considered. By combining the physical world with the online world, we can reframe how we view the linguistic landscape. We can go beyond what is seen and incorporate images, objects, place in time and space, and also people (Shohamy & Waksman, 2009). The combination of these different environments to explore linguistic landscape, along with perceptions and interactions, creates a much broader concept than a linguistic landscape, it is more like a language ecology⁵.

This was an ethnographic case study, informed by the principles of the Kaupapa Māori framework. It was important that the stages of the research were under the ownership of the participants. One way to create that ownership was through *kanohi ki te kanohi*⁶, a face-to-face presence. The ethnographic case study took place within the ECE centre so that each stage of the data collection and analysis remained visible. The relationship with the participants remained central. The key ethical considerations for this research were negotiating confidentiality, the consideration of appropriate methods of recording interviews, and working with tangata whenua⁷.

Undertaking this research in a Māori immersion ECE centre will contribute to the knowledge of high quality practice to support the revitalisation of te reo Māori. The description of each environment aims to give an indication of the language practices and the language policies

⁵ Note that this term is not being used as by Haugen (1972) but rather as a system of interconnected elements. See also section 3.1.

⁶ Face-to-face

⁷ People of the land

of each environment. In a language ecology, we can then explore how each of these environments interacts through its languages, people and policies. Given that the perceived vitality of the language within the landscape has an effect on the language use, the linguistic landscape is of value to study in terms of supporting emergent bilinguals in an ECE setting. The influence of linguistic landscapes on the languages being used is the rationale to research the linguistic landscape of an ECE setting, exploring how the people, their languages and technologies interact to influence and support the emergent bilingualism of the young children who attend the educational centre.

1.2 Research questions

What is the linguistic landscape of an award-winning Māori immersion early childhood education centre?

- What are the linguistic landscapes of the ECE, home and online environments within the language ecology?
- What are the language practices and policies within each environment?
- What are the digital technology practices and policies within each environment?
- How do the environments within the language ecology interact?

1.3 Definition of terms

The definition of terms has been divided into two categories, technical terms and words in te reo Māori. In this thesis, when Māori terms are first introduced they will be footnoted at the bottom of each page, and from then on used without further italicisation, translation or footnoting. There is a purposeful intention in doing this, it is a contribution to the normalisation of the use of Māori words and concepts within New Zealand English. It is also an expression of support for the aspiration of normalisation of Māori language use held by the participants in this research. All terms in te reo Māori can be referred back to under the definition of terms, where terms are listed in an alphabetical order.

1.3.1 Technical terms

Artefact – a selected display, object or sound clip recorded from the environment
Digital technology – cameras, tablets, smartphones, computers, stereos, televisions
Environment – the ECE centre, the home, and online
Interaction – communication and connection either physically, verbally or electronically
Landscape – the visible area of the environment
Language ecology – interacting environments of language use
Schoolscape – the linguistic landscape of an educational setting

1.3.2 Definition of Māori words and concepts

Haere mai - come here
Haukāinga - homeland

Iwi - tribe

Kia kaha - be strong
Kaiako - educator
Kaihautū - navigator (Head of Centre)
Kanikani - dance
Kanohi ki te kanohi – face-to-face
Kapahaka - Māori performing arts
Karakia - prayers
Kaupapa – theme, purpose
Kīwaha - phrases
Kotahi te waka - one waka
Kōhanga reo - language nest
Kōrero - speak
Koro - grandfather
Kupu - word
Kura - school
Kura Kaupapa Māori - Māori language immersion school

Manu kōrero - speech competitions
Mana reo – communication (as defined in Te Whāriki)
Manaaki - hospitality, caring
Matariki - star cluster signifying the beginning of the Māori New Year
Mātua - parents
Mihi - introduction
Mokopuna - grandchildren

Ngāi Tahu - the main Māori tribe of the South Island, New Zealand

Pākehā - non-Māori
Pānui - newsletter
Pēpi - baby
Pepeha - tribal introduction

Rangatiratanga - sovereignty

Tamariki - children (tamaiti = child)
Taonga - treasure/precious gift
Tangata whenua - people of the land
Te ao - the world
Te Ataarangi - community based Māori language programme
Te Kupenga - Statistics New Zealand
Te reo Māori - the language of tangata whenua
Te Taura Whiri i te reo Māori - Māori Language Commission
Te wheke - the octopus - the name of a Māori model of wellbeing
Teina - younger child
Tikanga - culture and customs
Tino Rangatiratanga - absolute sovereignty
Tipuna - grandparent
Tuakana - older child
Tūhoe - a Māori tribe of Te Urewera, New Zealand
Tukutuku - traditional Māori latticework

Waiata - songs
Wairuatanga - spirituality
Waka - canoe
Wānanga - tertiary institution
Whaea - female parent
Whakaiti - to belittle
Whakamā - to be shy
Whakapapa - genealogy
Whānau - family
Whanaungatanga - family connection
Wharehau - meeting house
Whāriki - mat, the name of the national early childhood Māori curriculum document

2: Literature review

2.1 Linguistic landscape

One approach to understanding what is occurring linguistically in the ECE centre is to capture the linguistic landscape. A linguistic landscape is the visual representation of any languages within a defined geographical or administrative landscape, for example labels, signs or advertising, in a street or institutional space (Landry & Bourhis, 1997). Landry and Bourhis explored perceptions of language vitality and language by using questionnaire and test data from previous studies on Grade 11 and Grade 12 francophones from around over 50 schools in Canada. They found that the power and status of the language and its speakers is relative to the prevalence of languages within the linguistic landscape, which reinforced the perception of a linguistic in-group and an out-group.

Landry and Bourhis show that the linguistic landscape is connected to language behaviour. They highlight the importance of the visual presence of minority languages in the linguistic landscapes within a dominate language environment.

Given their already weak position on the demographic and institutional support front, low-vitality groups may be more dependent on the linguistic landscape to foster favourable perceptions of in-group vitality, which in turn may stimulate greater use of the in-group language (p. 35).

Macalister (2010) conducted linguistic landscape research within New Zealand, in a town centre street representative of middle New Zealand, Picton. He found there was an 8.8 percent presence of te reo Māori. The linguistic landscape was predominantly English and had no signs containing only te reo Māori. The principle contributors to the English-only linguistic landscape were local commercial actors. It was the local community actors that were likely to produce signs containing te reo Māori. Interestingly, Macalister notes that the 8.8 percent is similar to the proportion of te reo Māori words used in New Zealand English, indicating that this linguistic landscape reflects a monolingual society, of which the representation of te reo Māori does not reflect the percentage of users of the language, but the dominant culture's adoption of the minority language as its own.

Not only is the linguistic landscape connected to the language behaviour, but it has also been shown to be strongly associated with language policy. Cenoz and Gorter (2006), in their study of linguistic landscapes in two similar streets in the Basque Country and Fresiland, found that the official language policy of minority languages was directly reflected in the linguistic landscape. This was reinforced by the fact that even though Fresian was more widely spoken in its environment, Basque had a stronger policy for minority languages as well as a higher visibility of minority languages in the linguistic landscape, leading to the conclusion that the stronger policy had a visible effect.

Many previous linguistic landscape studies have been focussed on geographical spaces, however there is a move towards institutional spaces as a defined landscape to study. This

has been referred to as a “schoolscape” by Brown (2012) in her study of the linguistic landscape in a school setting in Southern Estonia. The focus of the study was on the minority language Võro. This schoolscape included digital photos of the linguistic landscape within the school environment, interviews with the minority language teachers and observations of the Võro language in use in the classrooms. An additional environment was the virtual environment of the school’s website. Photographic items from the linguistic landscape, both physical and virtual, were coded in four ways, whether they were generated either top-down or bottom-up, which language was presented first, the type of sign, and the type of font used. The linguistic landscape of the school setting is of significance to study. As Brown states,

Schools are important mediums for the development of regional language, culture and identity (p. 80).

In this situation, despite the efforts to reintroduce the local language and culture within schools it was not reflected in the visible landscape, as the language was visually underrepresented. Although there was support from the Government in funding for the Võro language, the Government had difficulty convincing schools to incorporate it into their curriculum. Brown suggests two reasons for this. Firstly, the country’s need to develop a strong national identity and secondly, a new importance placed on fostering a European identity. Both, consequently, leading to the marginalization of regional languages and culture. This highlights the need to support minority language initiatives, not only financially, but also with a strong commitment through policy. In Brown’s conclusion, she suggests that researchers in the field of linguistic landscapes need to gain a deeper understanding of how the teachers, who take an active role in transforming the environment with the material use of language, shape the ideologies and consciousness of those within the environment.

It may be possible to work backward from the linguistic landscape to gain an understanding of the possible language use, beliefs and policies based on artefacts from within the landscape. As Spolsky (2009) notes, many of the studies have been based on photographs, counting and observations of the finished signs rather than the processes involved in producing the signs. In a purely quantitative study this may be suitable for knowing the number of items in the linguistic landscape, but it does not reveal important aspects of the sign such as the placement or size of the sign, that may increase the prominence and significance of the sign within the environment. In a study of signage and sign-making practices in a German-English bilingual educational setting from kindergarten to sixth grade in Western Canada, Dressler (2015) used a nexus analysis (Scollon & Scollon, 2004) to examine the decision making behind the creation of signage within the setting. Hult (2009) suggests that a nexus analysis is a useful tool for the ongoing development of linguistic landscape analysis. It involves exploring the historical body (ways of being), an interaction order (ways of doing) and discourses in place (ways of thinking).

Dressler’s use of the nexus analysis in the study of the linguistic landscape was a deeper approach that Brown (2012) was suggesting. This study went beyond the traditional analysis of signage to include a holistic look at the creation, purpose and use of signs from the teachers that created the signs. Photographs of the signs were taken, then classified into

two groups, top-down (made from outside the centre) and bottom-up (made from within the centre). In a focus group, teachers as sign-makers were interviewed while a slideshow of a representative sample of signs were presented to the group. The group was asked about the decisions involved in the creation of the sign, including the language use and the positioning of the sign, which lead to further discussion about the artefact. Dressler found that constraints in the sign-making existed. The teachers, as the primary creators of signs and promoters of bilingualism, were limited to creating bottom-up signage due to the lack of funds for top-down signage, therefore they bore most of the responsibility for the development of the linguistic landscape. The other constraint is the reach of the signage beyond the physical bilingual education setting. This compartmentalisation of the language use to within the physical setting within the school, reinforced the low status of the language as the reach of the language beyond the school setting was limited. Dressler's conclusion refers to Brown's (2012) comment on schools being a central place for perpetuating or disruption ideologies about language, and suggests that future research on linguistic landscapes in school setting needs to include the voices of the policy makers, sign-makers and students, as well as the discourses and constraints outside of the classroom.

Dressler used a nexus analysis in linguistic landscape research to explore the ways of being, doing and thinking behind the signage. Combining nexus analysis with linguistic landscape analysis gives a better understanding of the language ecology and how languages interact, in terms of the speakers and the societies in which they are used (Hult, 2009). Hult suggests an ecology of language approach to researching linguistic landscapes, through combining linguistic landscape analysis with nexus analysis, allows attention to be placed on several dimensions in a multilingual setting.

Shohamy and Waksman (2009) proposed broader dimensions of the linguistic landscape, to not only include the text within the landscape, but incorporate its dynamic, multi-modal and multilingual nature that is negotiated and contested. As an ecology, the linguistic landscape is not limited to the writing on the walls, but becomes an expanded view that is defined as the language in a public space. This includes the virtual reality that also becomes a part of the linguistic landscape. Shohamy and Waksman argue that the linguistic landscape viewed as an ecology, in the context of education, is a "powerful resource for connecting language education and the public sphere" (p. 328). In this research, the language ecology will be applied as a methodological framework and will be discussed further in 3.1.1.

The nexus analysis, although not strictly used in this study, has informed the formation and application of coding the linguistic landscape data and shaped the development of the interview questions regarding language practices and policy within an expanded view of the linguistic landscape, the language ecology.

2.2 Language and policy

The New Zealand Government has a commitment to the protection of Māori language, and does so through the development of policy. The Waitangi Tribunal and the Courts have found that active protection of the Māori language is a Government responsibility under the Treaty of Waitangi (Te reo Māori – the Māori language, 2000). The action the Government has committed to taking, in relation to the visibility of te reo Māori in schools is to,

Support state schools to look for more opportunities for te reo Māori to be visible.

This emphasis on the visibility of Māori language is again reiterated on the official Ministry of Education website (2015). A goal in Māori language and education is to,

Increase visibility of te reo Māori in nationwide media and schools to promote the currency and relevance of te reo Māori.

Policy in education has had a strong impact on the vitality and life of Māori language in New Zealand, although it has not always been a positive one. Te reo Māori was spoken by all Māori after the immigration of European settlers, however after the introduction of the Native Schools Act 1867, the Māori language declined. This Act required schools to teach in the English language only. It was only since the 1970's, after the formation of the Māori education initiative known as Kōhanga reo⁸, that Māori language began to make a resurgence. Intergenerational transmission, between a Māori speaking tipuna⁹ and their mokopuna¹⁰, was the basis on which Kōhanga reo was formed. The Kōhanga reo has been attributed to the successful resurgence of te reo Māori, both nationally and internationally. "The Kōhanga reo has revolutionized language revival programs and has adherents in many parts of the world" (Spolsky, 2003, p. 561). This grassroots movement greatly contributed to the revitalisation of te reo Māori, but not to the point where there exists a natural intergenerational transmission of te reo Māori within the home (Spolsky, 2003)¹¹. As there has been success in revitalisation with Kōhanga reo, early years education shows promise in its potential to support minority and indigenous languages within the homes.

In an analytical survey of the Māori language revitalization policy review, commissioned by the New Zealand treasury, Gin and Vaillancourt (1998) write;

Language visibility is an important policy measure because its official use and the generalisation of minority language visibility has a powerful (re)legitimation effect, which, in turn, impacts on people's attitudes. Research on language policy, no matter what discipline it hails from, confirms that positive attitudes are a *sine qua non* condition of language revitalisation. In a significant way, the visibility of the language contributes to it (p. 83).

⁸ language nest

⁹ Grandparent

¹⁰ Grandchild

¹¹ Spolsky's comment, although 13 years ago, would still be relevant given the continued decline in the number of te reo Māori speakers.

2.3 Revitalisation of te reo Māori

Since 1996, the census has asked New Zealanders: “In which languages could you have a conversation about a lot of everyday things?”; Māori is one of the response options. The 2013 census statistics shows that of the 125,352 (21.3%) of Māori that can hold a conversation in te reo Māori, 26.3 percent were aged under 15. The number of speakers under the age of 15 years has decreased by 6.2 percent since 2006. Despite the decline in young speakers of te reo Māori, since 2006 there has been an increase in number of speakers in the 64 plus age group. This increase in the number of speakers of te reo Māori in the 64 plus age, which was 9.8 percent in the 2013 census, does not seem to be impacting on the intergenerational transmission of the language to the under 15 age group.

Several suggestions have been proposed as to why the number of people who are able to hold a basic conversation in te reo Māori language has declined, such as a drop in the enrolments of children in Māori immersion early childhood education (Waitangi Tribunal, 2011), or that it may be the increase of digital technology and the way it is used by the younger generation interrupts intergenerational transference of language. Increased time and accessibility to technology may increase peer-to-peer communication, but it may also be reducing the face-to-face interaction of cross-generational contact in te reo Māori, creating less opportunities for the younger generation to talk and interact directly with parents and grandparents. The Māori Broadcasting and e-Media Outcomes Framework (2007) was developed to support new opportunities for promoting the Māori language and culture on other electronic media. Two research projects were used. One of the key findings were that Māori, particularly young Māori, were over represented in the group of heavy and extensive users of devices such as cellphones and iPod. The concept of *kanohi ki te kanohi* seems to be fundamental to the acquisition of knowledge in Māori, as it is for other languages. But Māori place a special importance on this aspect. This is a similarity shared with other indigenous cultures such as the Australian aborigines. A study with Aborigines in Australia (Kral, 2014) related increased digital use with a declining acquisition of appropriate interaction and speech styles. It was suggested that the increased interaction of peer-to-peer communication through digital technology, and reduced intergenerational face-to-face interaction where linguistic features such as the physical elaboration that occurs when speaking, was being lost amongst young speakers.

More descriptive data in relation to te reo Māori speakers could deepen the understanding of the factors effecting the revitalisation of te reo Māori. Te Kupenga (Statistics New Zealand, 2015) is the first survey of Māori health and wellbeing conducted post census in 2013, surveying 5,500 Māori about their social, cultural and economic wellbeing. In this survey respondents were asked a range of questions about their ability to speak, listen, read and write in te reo Māori, which included a more graduated scale for surveying the levels of te reo Māori speakers. In addition, the survey asked which environments they would use the language. The results showed that 64% spoke te reo Māori with someone they lived with, however 22% said they had no place where they spoke te reo Māori, 19% said they only had one place and 17% had only two places. Immersion early childhood education centres could be one, of a very few limited places, where speakers of te reo Māori can speak the language.

2.4 Immersion early childhood education

Te reo Māori has been on a pathway of resurgence since the 1970s, with the formation of educational initiatives such as Kōhanga reo, Kura Kaupapa Māori¹² and Te Ataarangi¹³. Kōhanga reo were set up by parents as “language nests” in 1982 (King, 2001), and are considered one of the most influential initiatives of the revitalisation (Spolsky, 1989, p. 89; Walker, 1990, p. 238). The Kōhanga reo movement is visualised as the driving force behind revitalisation (Te Kōhanga reo National Trust, 1985) and has paved the way to the creation and development of other ECE Māori immersion centres. The decline in numbers of te reo Māori speakers could be viewed as either the cause or effect of the decrease in the number of enrolments in Māori immersion ECE. In 1993 nearly half of Māori children enrolled in ECE were enrolled in a Kōhanga reo (Waitangi Tribunal, 2011). Since 1994 the number of Kōhanga reo centres and the number of children attending, has been steadily declining, even though the numbers of Māori children attending ECE has increased overall. In Ko Aotearoa Tēnei (Waitangi Tribunal, 2011), it explains that this may be due to a number of factors including parents increasing their working hours, and therefore preferring to attend a centre that requires less involvement, or the passing of elders who were the driving force behind the Kōhanga reo originally. Kōhanga reo has also largely missing out on the 20 hours of free funding per attending child, as the Government limited the funding to teacher led services therefore excluding parent or whānau led services (Bushouse, 2008).

2.5 Conclusion

The linguistic landscape is an important area of research within ECE centres as it may be a significant indicator of the vitality of the perceived in-group versus the out-group (Landry & Bourhis, 1997). As digital technology use is increasing, it is critical to see just how it is being used and how the online environment is interacting with the home and ECE centre environments. The language ecology is a metaphor that helps us to understand the connections between these environments. An understanding of the threads of interconnectedness and interactions between the linguistic environments of the home, online and ECE centre, may begin to contribute to developing strategies, through technology, to strengthen those connections and interactions that strengthen the language. In light of the decreasing numbers of children able to speak Māori, it is of importance to strengthen te reo Māori in the ECE setting.

¹² Māori language immersion school

¹³ Community based education

3: Methodology

3.1 Theoretical framework

3.1.1 Language ecology

The term “language ecology” was originally used by Haugen (1971). Language ecology has parallels to the biological term in relation to the current concern over the life and death of languages (Eliasson, 2015). In this study the term ecology is used as a metaphor to describe the expanding view of the linguistic landscape to incorporate perceptions of the participants in the environment, including the environments of the childhood centre, the home environment and the online environment. As the linguistic landscape moves beyond what is visually represented, connecting elements begin to weave themselves into the environment to create a language ecology.

Sager (2015) compared the language ecologies of emergent Spanish/English bilinguals in five preschools. She conducted semi-structured interviews with the teachers and teacher aides to understand language use practices and the factors that influenced the participants’ teaching. Parents were also interviewed to understand the language orientations and use in the home. In Sager’s research she included data from the home environment with the data from the preschool environment to create a language ecology. This data included not only the language use, but also the influences involved in the language practices within the centre and home environment. The combination of the environments and influences created what Sager referred to as a language ecology. Sager’s research did not include the online environment, which is an additional environment considered in this study.

Researchers (Brown, 2012; Said, 2011) have taken a deeper look into the linguistic landscape, by incorporating the perspectives and interpretations of the people interacting with the linguistic landscape. Additional extensions to the linguistic landscape have included the online landscape as an aspect of the schoolscape (Brown, 2012).

Incorporating the online environment into what is defined as the linguistic landscape extends the landscape beyond that which can be seen physically. This means not only the devices we can see, but also includes what we can see on the home screens, the computer desktops and on the ECE centre’s website or Facebook page.

Ecology as a metaphor better suits the interconnectedness and layers of the language, environment and relationships, both physically and virtually. The term “ecology” may support seeing the linguistic landscape more holistically. Adding to a more holistic picture of the landscape are the perceptions of the people that interact with the landscape. Landry and Bourhis (1997) included people’s perception of the vitality of languages represented in landscapes. Their findings also concluded that there is a relationship between the linguistic

landscape and language policies. Expanding the linguistic landscape becomes more complex. Previous studies have drawn on complexity theory and post-modern sociolinguistics to reveal language use in multilingual environments (Kramsch & Whiteside 2008). The complexity of the ecology, as opposed to a flat landscape, is what Laidlaw and Wong (2016) explore in their research which combines the data from two studies involving technologies use at home and introducing technology into an early childhood setting. It stated,

As Wong's research indicates, home environments seem to easily support nonlinear, interconnected, multilayered, textual learning practices. Within classroom spaces, working in a nonlinear, emergent and interconnected fashion can be more challenging when juxtaposed with institutional aspects of schools, linear curriculum outcomes and mandated assessment structures (p. 3).

Exploring the landscape deeper, into the realm of human perception, beliefs, and the world of technology, looks beyond the landscape and into an ecology where we are more likely to discover the roots of what we can see. This may be relevant in a Māori setting to not only describe, but to seek out knowledge that goes beyond the perception of the linguistic landscape, and into the understanding of the practices and processes that underlie the displays on the walls. Jackson (1987, p. 41), states Māori attitude towards knowledge and understanding, "seeks not merely to describe, but to seek out seeds of understanding."

For the purpose of this research, the language ecology will be viewed as three connecting environments, the home environment, the ECE environment and the online environment. The focus of the research is not only to describe the linguistic landscape of these environments, but to see how these environments connect and interact. Figure 1 below illustrates the three environments associated to the centre. Where they intersect are where the environments interact. As an example, the intersection of all three environments could be the centre's website, where whānau¹⁴ can register and login to interact with the centre in the online space, and where the centre can upload information and photos to share with the parents.

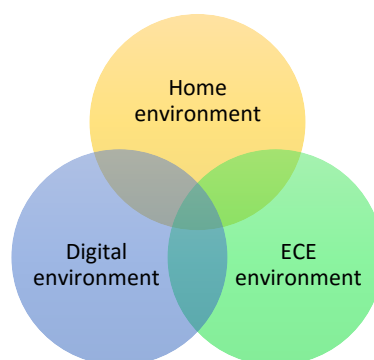


Figure 1: The Language Ecology

¹⁴ Family

3.1.2 Maslow's hierarchy of needs

The theoretical framework used for the analysis of the data is informed by Maslow's hierarchy of needs. This theory is based on a hierarchy of human needs and was introduced in 1954 in Maslow's book *Motivation and Personality* (1954). Maslow's theory is an explanation of motivation for humans in any given context. An example of this is if a person is really thirsty, then unless that need is met, they will not be focussed on the higher levels within the hierarchy, such as connection or self-esteem. When the base needs are met then there is motivation to move towards the higher level needs. Maslow's hierarchy has been useful in educational settings for understanding more holistically the individual's motivation for learning, reframing educational practice towards meeting each child's physical, social and emotional needs as opposed to viewing behaviour as a reaction to the environment (McLeod, 2014).

This hierarchy of needs is presented in a pyramid where at the base of the pyramid are our physiological needs. If a human's physiological needs are not met, they cannot move on to the next level of needs. The needs progress through the hierarchy and ultimately peak at the apex of the pyramid, self-actualization. There has been some criticism surrounding Maslow's theory, and this has been due to the strength of the methodology that his theory was based on (McLeod, 2014). Maslow undertook a biographical analysis of 18 people he considered to be "self-actualised", who were predominantly well-educated white males. Using biographical data, Maslow developed a list of characteristics to form the basis of his theory.

Additional criticisms of Maslow's hierarchy are, that it is not possible to have such a clear distinction between needs, and the focus of the individual without the recognition of the need for connection and community at every level of the hierarchy. Rutledge (2011) explains how a human's needs are more complicated and intertwined than Maslow presents them. As well, all of the needs, even the base physiological and safety needs, would not be met if it were not for social connection at every level. Maslow's hierarchy of needs is based on the needs of the individual, and does not fully account for the importance of the community and connection that exists in all levels of the hierarchy, from physiology to self-actualisation.

Maslow's hierarchy has been modified in this thesis to create what is termed as "the waka of needs", which will be used as a theoretical framework for the analysis of this research. The waka of needs will be discussed further in section 5.1 and is visually represented in figure 14. This modified hierarchy of needs better reflect the needs of the community that supports the individual, with undefined and interconnected needs, that is mobile and based on the self-actualisation of individuals in the waka. The needs are distinguished in this thesis simply as a way of categorizing the data for analysis.



Image from https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs

Figure 2: Maslow's Hierarchy of Needs

Figure 2 shows the needs included in Maslow's hierarchy, defined as (McLeod, 2014):

1. Biological and physiological needs - air, food, drink, shelter, warmth, sex, sleep.
2. Safety needs - protection from elements, security, order, law, stability, freedom from fear.
3. Love and belonging needs - friendship, intimacy, affection and love, - from work group, family, friends, romantic relationships.
4. Esteem needs - achievement, mastery, independence, status, dominance, prestige, self-respect, respect from others.
5. Self-actualization needs - realizing personal potential, self-fulfillment, seeking personal growth and peak experiences.

In relation to the revitalisation of te reo Māori, Maslow's hierarchy has been used to explain how unmet needs can impact the regeneration of a language. As King (2007) explains, the regeneration of indigenous languages is affected by economic situations that threaten the safety of the individual. When there are serious challenges to meet economic needs, the effect on the revitalisation of the language can be severe. As Māori moved away from rural tribes and into the cities seeking economic opportunities, their economic needs took priority over their cultural and linguistic connections. As the economic situation for Māori improved, there was then motivation to a connection to culture through the acquisition of the language.

3.2 Ethical considerations

3.2.1 Kaupapa Māori informed research

As a non-Māori researching a Māori setting there may be further interconnectedness and layers of understanding that may not enter my awareness, or my understanding may remain framed within the dominant hegemony. There may be limitations in the non-Māori researcher's ability to describe things such as *tikanga*¹⁵, *wairuatanga*¹⁶ and *whanaungatanga*¹⁷, which may be hidden from the researcher but ever present in the language ecology. A more culturally appropriate framework for the analysis of the research could possibly be the Māori model of wellbeing, Te Wheke (Pere & Nicholson, 1991).

3.2.2 Te Wheke

Te Wheke, a Māori model of wellbeing referred to by Kaiako B in example 14, is represented by the image of the octopus (Figure 3). The head of the octopus is the tamariki¹⁸/whānau, while the tentacles represent dimensions of needs that give sustenance to the whole. Within each dimension there are many facets. In contrast to Maslow's hierarchical nature, the octopus moves laterally in "an infinite direction" (Pere & Nicholson, 1997, p. 3) with no defined boundaries.



Image from <http://www.health.govt.nz/sites/default/files/images/our-work/Māori-health/te-wheke.jpg>

Figure 3: Te Wheke (Pere & Nicholson, 1997)

¹⁵ culture and customs

¹⁶ spirituality

¹⁷ family connection

¹⁸ child

The dimensions of Te Wheke are:

Whānau – the family

Waiora – total wellbeing for the individual and family

Wairuatanga – spirituality

Hinengaro – the mind

Taha tinana – physical wellbeing

Whanaungatanga - extended family

Mauri – life force in people and objects

Mana ake – unique identity of individuals and family

Hā a koro mā, a kui mā – breath of life from forbearers

Whatumanawa – the open and healthy expression of emotion

3.2.3 Kaupapa Māori practices

This research was informed by the principles of Kaupapa Māori research methodology to capture Māori perception and understanding of what may be beyond what is observable to the researcher. The following seven Kaupapa Māori practices for researchers (Smith, 1999, p. 120) were followed:

- Aroha ki te tangata (a respect for people)
- Kanohi kitea (the seen face; that is, present yourself to people face-to-face)
- Titiro, whakarongo ... kōrero (look, listen ... speak)
- Manaaki ki te tangata (share and host people, be generous)
- Kia tūpato (be cautious)
- Kaua e takahia te mana o te tangata (do not trample over the mana of people)
- Kia ngākau mahaki (do not flaunt your knowledge).

This involves a high level of communication at all stages, consultation with University advisors, the Head of Centre and Board of Trustees, as well as being open and present in the environment. The importance of being present and available as a researcher is connected to the concept of *kanohi ki te kanohi* (Pere & Barnes, 2009). Being face-to-face and present becomes an important part of the methodology. An ethnographic case study places the researcher in the natural environment to observe, interact, document and interpret is supporting a *kanohi ki te kanohi* approach to understanding. I attended the centre on a weekly basis over a period of two months prior to the interviews. During this time, I interacted with the kaiako and tamariki in a participatory manner as a beginner of te reo Māori. Positioning myself as a beginning language learner during this time was in line with the Kaupapa Māori-informed research practices.

As the research is in an award-winning Māori immersion ECE, it may be easily identifiable as there are few Māori immersion centres in its location. This was discussed prior to the research beginning, as in some cases identification may be preferred as participation in the research project may contribute to the mana of the centre (Pere, 2009). All participants have consented to participating in the research with the understanding the centre may be

identifiable. Participants were informed of the steps taken to preserve participant confidentiality. The information sheet explained that the centre may wish to publicise the research and how the research will be published. Locating details of the centre and participant details have been changed to protect the confidentiality of the participants. Working with tangata whenua is a significant ethical consideration, therefore being informed by the principles of the Kaupapa Māori framework by following the Kaupapa Māori practices for researchers (Smith, 1999, p. 120) allows this discussion through the ongoing and face-to-face nature of this research. The design of the methodology ensured that the researcher was present in the centre. That meant that there was flexibility so that cultural appropriateness could take precedence.

The connection to the Kaihautū¹⁹ was through shared involvement in the *E Tipu e Rea – A Better Start* research project funded by the Ministry of Business, Innovation & Employment. There are three broad themes of the project: 1. Maternal health, pregnancy and early childhood; 2. Successful transition into adulthood; and 3. Education: Living in a Digital world. This established relationship allowed the researcher access to the centre prior to the data gathering, to form relationships with the staff and children. The presence of the researcher was a way in which to embody the principles of Kaupapa Māori research practices through a physical presence and becoming a part of the immersion setting.

The Board of Trustees of the centre were also approached by the Kaihautū, and consent for participation was given. The participants were accessed through the ECE centre and approached by the Kaihautū face-to-face regarding their interest in participating. All participation in the research was voluntary and the Kaihautū was committed to advising and reviewing observations, ensuring that parents and children who did not wish to participate were not inconvenienced. The aim was to recruit two whaea²⁰, two kaiako²¹ and the kaihautū as participants. Information sheets and consent forms were provided to the participants and the Board of Trustees.

¹⁹ navigator (Head of Centre)

²⁰ female parent

²¹ educator

3.3 Method

3.3.1 Context

The centre cares for tamariki aged zero to five years. The centre was built in 2005 and professionally landscaped, in order to create an entire environment that fosters a Māori look and feel from the moment you enter the premises. The space inside is all open plan, which means for this ECE centre there is no separation between the area for pēpi²² and the older tamariki. The children are integrated, apart from occasional group activities, and this supports the Tuakana²³ Teina²⁴ methodology. Tuakana Teina is a Māori methodology of reciprocal learning where the oldest teach the youngest and the youngest teach the oldest, similar to a buddy system (Te Kete Ipurangi, 2016).

The centre was formed in 2002 by a group of parents who knew each other through a kapa haka group. This Māori immersion early childhood centre follows the Te Whāriki document, which differs from Kōhanga reo. The centre is described by the Kaihautū as being a “more intense bilingual centre” and says this is because the centre will always be situated within English as the dominant language of New Zealand. There are seven Māori speaking kaiako, five who speak fluently and two on the learning continuum. The centre does not have parent help but parents are always welcome to participate. Forty-three tamariki attend, of which 41 identify as being of Māori descent. The level of te reo Māori varies amongst the tamariki and kaiako, and families are encouraged to learn alongside their tamariki. Many of the families have connections to one another outside of the centre through sports, cultural groups and work. This centre has a varied economic and educational demographic. Some of the families live locally and other families travel across suburbs to attend the centre especially for te reo Māori and tikanga Māori.

3.3.2 Participants

Five adult participants were approached for the study, two kaiako, two whaea and the kaihautū. All participants, except one, were known to the researcher prior to the interviews, as the researcher had met participants during the initial visits to the centre.

Kaihautū

She was a whānau member of the original kapa haka group that formed the centre. The tamariki of the Kaihautū, of Māori descent, also attended the centre and she now has her mokopuna attending.

²² baby

²³ older child

²⁴ younger child

Kaiako A

Kaiako A is of Māori descent, and grew up in the North Island with te reo Māori since she was a young child. She attended Kōhanga reo and Kura Kaupapa, where she learned te reo Māori orally. She says she feels that te reo Māori is natural and a whānau comfort to her. She has been working at the centre for six years.

Kaiako B

Kaiako B is of Pacific Island and Māori descent. She grew up not having a strong connection to te reo Māori and tikanga. She has her own children at the centre. She started working at the centre around ten years ago.

Whaea A

Whaea A is originally from a different part of New Zealand, and moved to the area four years ago. She currently has one child attending the centre as well as working part-time at the centre. Her eldest child also attended the centre.

Whaea B

Whaea B has three children under the age of five years old. Her eldest child attended a different kindergarten and her middle child now attends the centre. She is sometimes employed at the centre as a reliever.

3.3.3 Data collection method

The research was divided into two stages of data collection. Stage one was collecting data from the linguistic landscape through two 10-minute videos around the circumference of the centre, photographing individual items from the linguistic landscape, photographing the items of technology seen in the centre, and capturing screenshots of the online environment associated with the centre. Stage two of the data collection was conducting individual semi-structured interviews lasting no longer than one hour, with two kaiako, two whaea and the kaihautū. The purpose of the interviews was to discuss language and technology practices and policies. Each interview was audio recorded and then transcribed. The transcriptions were offered to each participant for review. No amendments to the transcripts were made.

As this was not a quantitative study, not all of the items from the linguistic landscape and online environment were captured. Items from the linguistic landscape were selected if they had any language displayed on them. Samples were taken from larger displays where the sample was representative of the majority of the display. A total of 34 photos of items were collected from the linguistic landscape, five photos of items of technology in the centre, and 16 screenshots from the online environment of the centre. The photos within the centre were restricted to the inside space that the children had access to, this was not including the bathrooms, the kitchen or sleeping areas.

3.3.4 Stage One – The linguistic landscape

Previous procedures for gathering data from linguistic landscapes have been through taking photos. However, a photo is a static image of an item that does not show how it relates to the context, which may limit the view of the entire ecology. With the opportunity to improve on the data collection methods used in previous linguistic landscape research, a video recording was taken. Video, through using an iPhone, was used to capture a panorama recording around the circumference of the ECE centre. This allowed a record of the context of the photographic images taken from the centre, a supplementary reference for the photographic data, and allowed the opportunity to take photos directly from the video if any items were of further interest. It also gave the researcher a better sense and feel of the physical space, and how the photographic items sat in relation to one another.

Two versions of the linguistic landscape panorama video were captured, one taken at head height and the other at waist height. The intention of this was to try to capture two perspectives of the linguistic landscape. The waist height panorama video recording was to capture the possible perspective of the child attending the centre. The head height panorama video recording was to capture the possible perspective of the adults.

The use of technology in the environment meant that not only did a physical linguistic landscape exist, but an online virtual environment existed too. The data collection not only included photos of the tangible digital technology items in the centre, such as televisions and computers, it also included the online virtual landscape of the centre, such as websites and email. Therefore, in addition to the capturing the linguistic landscape of the walls at the centre, photos of the tangible digital technology within the centre and online virtual technology screenshots were also taken and included in the data.

3.3.5 Stage Two – Semi- structured interviews

Two whaea, two kaiako and one kaihautū were interviewed. Five artefacts from the linguistic landscape were selected and used as examples to be discussed in more detail with the participants. The selection of the artefacts was based around the informal conversations and recommendations from the staff of the centre leading up to the interviews.

The focus in the interviews was on policy and practice of languages and digital technologies. In addition, the whaea were asked to describe the languages they saw and heard in their home. If the interview was conducted away from their home, the data gathered relied on the ability of the whaea to accurately recall the linguistic items from their home from memory.

Below are the guiding questions for the semi-structured interview for each participant. All questions were used only as a guide, the conversational nature of the interview meant that

the interviews with whaea and kaiako began mostly with their personal language learning journey, the topics and questions evolved naturally. The questions for each interview type included questions about practice and policy of language and digital technology.

Kaiako

- What are your language practices at the ECE? (practice)
- What do you do to encourage the development of te reo Māori? (policy)
- How do you use digital technology in the ECE centre? (practice)
- What is the policy on this? (policy)

Whaea

- What are your language practices at home? (practice)
- What do you do to encourage development of te reo Māori? (policy)
- How do you use digital technology at home? (practice)
- When would you encourage or discourage digital technology use? (policy)

Kaihautū

- What online language practices does the ECE centre have? (practice)
- What online digital technology does the ECE centre use? (practice)
- What is your online policy? (policy)
- How does the centre encourage the development of te reo Māori? (policy)

The average duration of each interview was just under one hour. All interviews, apart from one whaea, whose interview was conducted via Skype, were conducted at the centre. Two interviews were in the staffroom, one in a quiet area in the centre and last interview was within the centre with a small number of the children and another kaiako present. The remote interview with Whaea B conducted via Skype had advantages over the face-to-face interview conducted in the centre, as it allowed Whaea B to walk around her home and give a more detailed description of the linguistic landscape and technology in the home. It also allowed her to control the video as she was able to turn the video camera off and on to control what I was seeing.

3.3.6 Method of data analysis

Photographs of items in the linguistic landscape were collected and coded. The coding of linguistic landscape data is discussed in more detail in the presentation of data in section 4.1.2.1. Five artefacts from the linguistic landscape were selected to be explored further in the interviews conducted with teachers and parents. Interviews were transcribed and then analysed for general themes.

The interviews were based around five artefacts selected from the linguistic landscape. The selection of the artefacts was based on the conversations and recommendations of the participants prior to the interviews. The purpose of discussing the use and aims of the

artefacts was to gain an understanding of the policies and practices of the home, centre and online and to understand how these environments interacted with one another. Common themes within the interviews were identified that were associated with the five artefacts in some way, therefore the interview data presented under each artefact heading in some way contributes to the general theme associated with the artefact. These themes were *achievement and togetherness, tikanga and normalisation, identity and belonging, Māori as an oral language, and interaction and connection*. These themes formed sub-headings for the descriptions of each artefact in section 4.4 below.

It appeared that the themes had some similarities to Maslow's hierarchy. It was during this process of creating themes for the presentation of the artefacts that Maslow's hierarchy of needs was selected as a framework for analysis and to shed light on the processes occurring within the centre in relation to the linguistic landscape. As Maslow's hierarchy is based on the needs of individuals, the hierarchy was modified into the "Waka of needs" in section 5.2, which became a framework to analyze the needs of the group and community that the participants referred to in the interviews.

4: Presentation of data

The presentation of the data is under the main headings of 4.1 the centre environment, 4.2 the home environment, 4.3 the online environment, and 4.4 the artefacts. The description of each environment will start with an overview of the policies and practices within that environment followed by a description of the linguistic and technology landscapes. The presentation of interview data under these headings is a way of presenting the policies and practices that are interwoven into the linguistic landscape, and not necessarily directly connected to the heading itself. This was done purely as a practical means to present the interview data in some kind of integrated way. These elements are linked together with the researcher's commentary. Artefacts will be introduced with a broad policy heading, described, and then interwoven with interview data.

4.1 The early childhood centre environment

This section includes an explanation of the national curriculum for early childhood education policy, Te Whāriki. As the centre had no official centre-based policy regarding the language and digital technology practices, the practice of normalisation and tikanga will be discussed as an informal policy that the centre is following.

4.1.1 Language policy and practice

4.1.1.1 Te Whāriki – as a policy

The centre follows Te Whāriki, the Ministry of Education's early childhood curriculum policy statement. There are four guiding principles and five strands that are interwoven in this policy statement. The principles are empowerment – whakamana, holistic development – kotahitanga, family and community – whānau tangata and relationships – ngā hononga. The strands of the curriculum are prominently displayed in the entrance to the centre, in a display created by the centre itself.



Figure 4: Te Whāriki display

The five strands of the document are: well-being – mana atua, belonging – mana whenua, contribution – mana tangata, communication – mana reo, and exploration – mana aotūroa. The statement under the heading of the communication strand is

The languages and symbols of their own and other cultures are promoted and protected (Ministry of Education, 2016).

In the centre's enrolment form under the section "Whānau rights and responsibilities" there is a statement that says that the tamariki have a right to their own languages, and they also have the right to their own dialect. This is in alignment with the national policy, which the centre follows through with practice. The centre currently has two dialects, Tuhoe²⁵ and Ngai Tahu²⁶. If the centre knows a child's dialect, then the centre endeavours to use it with the child. Along with different dialects of the Māori language, the centre also embraces other languages, celebrating, for example, the Samoan language week which occurred during the course of this study. As a speaker of other languages myself, I was also encouraged to use other languages with the tamariki during my time in the centre.

Another a part of the "Whānau rights and responsibilities" in the enrolment form that whānau must sign, is agreeing that there will be at least one person in the house that can kōrero²⁷ with the tamariki. However, that can be a challenge, as these quotes from the Kaihautū illustrate:

Example 1 - It's a big ask to ask a family that's working so many hours a day to survive to take up a reo course so that they can kōrero in te reo Māori (Kaihautū).

Example 2 - A lot of them will say that they are going to take lessons and things like that. But what we know is they often just don't have the time, they really don't (Kaihautū).

Te Whāriki also highlights, underneath the goals in communication, that,

There should be a commitment to the recognition of Māori language – stories, symbols, arts and crafts – in the programme (Ministry of Education, 2016).

For the centre, there is no specific language policy on using te reo Māori. Kaihautū explains,

Example 3 - We don't have a specific policy on the reo. I think it's just because we are normalising it for us, this is who we are (Kaihautū).

²⁵ A Māori tribe of Te Uruwera, New Zealand

²⁶ A Māori tribe of the South Island, New Zealand

²⁷ Speak

4.1.1.2 Normalisation - as a practice

This normalisation of te reo Māori was a personal goal expressed by both kaiako, when asked about what guided their teaching practice within the centre. For Kaiako A this stemmed from her personal experience of going through Kōhanga reo and Māori immersion education.

Example 4 - One of the biggest reasons why I came here to [the centre] is because I knew that they were all about learning te reo Māori and tikanga. I have grown up with all of them so the way we run things is the way we live in general, for me it's a whānau comfort (Kaiako A).

When asked if that natural feeling was something she tried to create with the tamariki as well, she responded,

Example 5 - Yeah, just to make it feel more normal and every day. Because not all of them get it at home. So just for them to come in here, I try to make it feel as normal as possible for all the kids. Because we use te reo Māori every day and for them it does become a normal every day thing. (Kaiako A)

Kaiako A says she feels less confident at English than she does te reo Māori, as she learned it by ear. She found learning through paper a whole different experience and she did not learn to read and write in English until she was about 10 years old. She is currently studying early childhood education in te reo Māori, in which there is a limited face-to-face component, a method of learning where she says she feels she achieves more. She says she feels like a “token Māori” as there were 37 participants in the course and they were all beginners at te reo Māori. Despite her confidence and fluency in te reo Māori, she is continually learning, and she says she sees that being at the centre is really helpful for her te reo Māori and her ECE studies.

The physical space of the centre facilitates the use of the language for both whaea, who both expressed an emotional discomfort in speaking te reo Māori in public spaces outside of the centre. For Whaea B, she notices that on the days her child attends the centre they will use more te reo Māori. When asked about how she uses te reo Māori she said,

Example 6 - I know we obviously use more Māori when we get home from the centre but there are no rules in place yet. But I think that I am going to aspire to one. I think also I used to be shy about speaking Māori because my level was so low. I've obviously got more confidence being at [the centre] and I am still more confident using it at [the centre] than I would be outside (Whaea B).

Whaea B said that she considers that feeling less confident speaking Māori outside of the centre may be because of the community she lives in, and said that if she lived in a community with more speakers of te reo Māori then she would probably feel more comfortable. She adds,

Example 7 - I feel such a beginner. I'll use it around pre-schoolers but not the general public (Whaea B).

This sentiment was shared by Whaea A, who said she found the interaction with pre-schoolers comfortable and beneficial for her own learning of te reo Māori,

Example 8 - There was one child and I liked learning off him. I found him easy to bounce off. I don't know why but he said a word "iti noa iho" which means "it's only a small one", he had a sore or a scratch and it was only small. I asked him what that meant. He just kept repeating that for me. Wow, I could learn off this child (Whaea A).

When asked why she considered learning from a child as better for her she replied,

Example 9 - Because I think that you are at the same level as them. They are not going to correct you if you're wrong, or tell you. It's easier to learn off a child and it's one way to get to know the child as well (Whaea A).

4.1.1.3 Tikanga – as a process

When asked about how she uses te reo Māori at the centre and what influences her teaching, Kaiako B talked of tikanga and the importance of everything having a process.

Example 10 - Everything you do is always a process. It might just seem like normal day to day stuff but for me I know that there is always a process to something. Tikanga is one of them. I think when we are teaching throughout the day it's interwoven, like I said with the normalisation of the reo, it's in what we do (Kaiako B).

For Kaiako B she has a strong motivation to normalise te reo Māori after growing up without it. Her father only began to develop an interest in Māori life before he passed, when he became a carver for the Te Wānanga o Aotearoa²⁸. She was raised predominantly Pacific Island and did not grow up with the "tikanga and te reo, that Māori lens". She says the history on both sides of her family was not particularly happy due difficult family circumstances. The pain and negative emotions possibly contributed to loss of the connection to Māori identity and culture. Kaiako B said she only used to know her waka²⁹ and her iwi³⁰, like it was all she needed to know, which she said she felt was quite blunt. Her friends were mostly Māori and could whakapapa³¹ back, so she said she felt it was "dumb" that she could not. Her husband, who is of Māori descent, can whakapapa back to the demi gods, which she said she finds inspiring. Growing up without it, she said she sees the necessity for it, that when it is gone it is stripped, who you are and who you are as a person. She said she views the whakapapa as a taonga³², and it is something that she wants her children to have. She said she believes it is her responsibility to give that to her children. She said she feels like her journey learning te reo Māori is only just beginning. She recalled her memories of starting at the centre, and of her,

Example 11 - Spending the whole day quiet and whakamā³³ (Kaiako B).

²⁸ Tertiary institution

²⁹ canoe

³⁰ tribe

³¹ genealogy

³² treasure/precious gift

³³ to become shy

Then she started using simple phrases. She was overwhelmed at how much te reo Māori was spoken at the centre, as there were a lot more fluent speakers there then. She said she started to,

Example 12 - Whakaiti³⁴ myself because I thought I was going to do it wrong (Kaiako B).

The centre funded her training and she was told that she picked it up fast, but said that,

Example 13 - I picked it up because I wanted it so badly (Kaiako B).

In relation to how Kaiako B's own personal experiences have shaped her teaching she says,

Example 14 - I've been to centres where they have had Māori, but it's just a cassette that's it. Put it into the cassette player and push play and they just read a book. But the thing with Māori, Māori people, or the Polynesian in general, is the fact that they can take anything and make it their own. Turn the book into a song. We are theatrical people. We tend to go on tangents, but I think that's massive. You can't always depend on the box ticking I think. When we are doing our teaching we have a kaupapa³⁵ but the reo is intertwined so that we focus on the child first. A lot of Bronfenbrenner and Te Wheke³⁶, which is another terminology, pedagogy, and it's the octopus that has tentacles, 8 tentacles that are the fundamentals of how a child is looked at within te ao³⁷. So those are first and then I think once you have encompassed that then, what you are trying to teach, and the child's interest. The language is woven in and they'll pick it up faster because they love what they are doing. You're looking after their wellbeing and the reo is what's being learned. I think that's that for me that's how it is done (Kaiako B).

For both whaea they said they were taking the opportunity to develop their own te reo Māori through being involved in the centre, both as a parents as well as members of staff. Both shared a background of not learning te reo Māori, therefore the centre was a place of learning for themselves, as they joined their tamariki on their te reo Māori journey at the centre.

Whaea A grew up hearing te reo Māori being spoken by her grandmother and other elders, but saw there were less people speaking it now, which she said she thought was sad because,

Example 15 - They've got nobody to kōrero with in their own language (Whaea A).

She said that this decrease in the number of people speaking it was the case for both her side and her partner's side of the family. Many of her family who spoke te reo Māori at home were disciplined for speaking it at school. She said her wish for her children to be able to speak te reo Māori freely, or any other language they learn, because te reo Māori was a part of their identity.

Example 16 - Because it is our identity, it's where we come from. Way back a lot of my whānau spoke Māori, that's all they spoke at home. When they were at school, they were disciplined because they

³⁴ to belittle

³⁵ theme, purpose

³⁶ Pere & Nicholson (1997)

³⁷ the world

spoke their language in the school system. I want the boys to be able to speak freely, with whatever language they learn (Whaea A).

The koro³⁸ of her tamariki is fluent in Māori and will speak to his mokopuna³⁹ in te reo Māori and they will listen. For Whaea A, she said she had no specific policy for language use in the home but just tried to encourage her children to kōrero by engaging in te reo Māori herself.

Whaea B identifies as being Māori,

Example 17 - But I haven't been raised in a very Māori upbringing per se (Whaea B).

None of her family members speak te reo Māori. She spent 12 years living overseas, speaks another language, and her eldest child goes to a second language kindergarten on a Saturday. She said she believes,

Example 18 - The key is to get it in young and early to avoid the grammar lessons (Whaea B).

She found the centre online. She was originally looking for a Kōhanga reo. She said she found the centre, with the implementation of Te Whāriki, was a good mix of both and a good fit for her and her child. She said her aim was for her child to gain a second language and for herself to improve in te reo Māori at the same time.

4.1.2 The linguistic landscape

The video recording of the linguistic landscape at the two heights, both adult head height and waist height, revealed that there was very little language or displays on the walls at the level of waist height and below. This led to the question "Who is the linguistic landscape for?". The answer to the question as to why there were no displays on the wall at waist height or below from the Kaihautū was a practical one, "because the babies rip it off." It has established a position in which we begin to view the function of the linguistic landscape, to connect with the parents.

Kaiako A explains,

Example 19 - Most of the stuff we put up on the wall are things through the year that we've been doing with the tamariki. We use that to stay on the wall, so that when whānau come in to pick up their babies they can see what we have actually been learning and why (Kaiako A).

Kaihautū builds on the idea that the intended audience of the displays is the whānau,

Example 20 - We put a lot of written things on the wall for the benefit of the parents. We're hoping that they look at the walls, seeing what their child has been up to and reading the kupu⁴⁰ and

³⁸ Grandfather

³⁹ Grandchildren

⁴⁰ word/s

hopefully that's encouraging them to ask "What's that word?" ... and that gets the conversation about how much reo they have been learning and how much reo there is in the home (Kaihautū).

The physical space of the centre allows for parents dropping off and collecting children to easily see the displays on the walls, as it is one large open room. The processes involved in pickup and drop offs allows the parents to enter the space of the children, walk around, watch or participate in the activities. Anyone entering the building is visible to the teaching space, therefore they are always greeted in te reo Māori.

When referring to the *kīwaha*⁴¹ displayed on the walls in the staffroom, the Kaihautū was asked if the teachers used the items on the wall. She answered,

Example 21 - What we found was you don't actually use them unless you are already using them (Kaihautū).

and added that,

Example 22 - The Te Ataarangi tutor that we had said that if anything, they were probably going against us because you think if they are on the wall then you don't need to do it (Kaihautū).

This is the reason why the *kīwaha* were removed from the main area of the centre. They used to be on the walls in the main centre area,

Example 23 - So parents could come in and see them and we'd often get parents asking us to send them copies, which they never looked at because they never used them (Kaihautū).

Since removing the items she has found that the kaiako are actually using the *kīwaha*. She adds,

Example 24 - It's the training that you do together, like when we do Te Ataarangi classes. The stuff that we learn in the classes is what gets used. But for us on the wall, it's just a reminder (Kaihautū).

Something that Whaea B said she has used from the beginning was the whiteboard inside the centre. Kaiako A said that they use the whiteboard throughout day and it is used as a way to encourage the parents to use te reo Māori. The centre welcomes and encourages parents to come in and take photos or write things down. This applies as well to other resources on the walls, such as the *karakia*⁴² and *waiata*⁴³ on display. Parents are welcome to join in *karakia* or mat time so that they can also learn the songs and are told,

Example 25 - You're welcome to record with babies (Kaiako A).

This is seen as a way to help the parents with their te reo Māori.

⁴¹ phrases

⁴² prayers

⁴³ songs

When referring to the linguistic landscape, Whaea B expressed that because she has learned languages in the past, she does not lack confidence in approaching the kaiako to ask “What does that mean?”. She said this confidence is similar to how she was when the kaiako were speaking, if she heard something that she didn’t understand she would ask what it meant.

One of the routines at the centre is to say karakia before eating. Both whaea, especially as they are both working there as well, expressed that giving karakia was not something they felt confident doing. Whaea B said it was because she didn’t know any karakia, but she has since repositioned the words of the karakia on the window so that she can read it and use it. In addition, she has also asked the kaiako for the rhythm of the karakia. Whaea A said that she lacked confidence when saying it by herself, because she did not want to make a mistake or choose the wrong karakia. For her, she pushes herself to increase her confidence,

Example 26 - I just keep saying it and pushing myself and saying “You can do it. You can do it” (Whaea A).

4.1.2.1 Photos from the linguistic landscape

Each photo was coded in four ways.

- Language – What was the level of te reo Māori or English?
- Permanence – Was it a fixed or temporary display?
- Function - Was it static or dynamic?
- Publisher – Was it made top-down or bottom-up?

Of the 34 photos of items that were collected from the linguistic landscape of the centre environment the majority, 24 items, contained only te reo Māori or mostly te reo Māori. Of those with te reo Māori, 19 items have been produced by centre (bottom-up) as their own resource and 5 were produced by outside of the centre (top-down). Seven of the items in the linguistic landscape of the centre were in English only, of which six were top-down publications. Top-down published items were considered to be materials created from outside of the centre, such as an independent business or Government organisation. Bottom-up published items were considered to be created from inside the centre.

Photos from the linguistic landscape

Table 1

Coding of photos from the linguistic landscape (n=34)

Language	Permanence		Function		Publisher		Total
	Temporary	Permanent	Static	Dynamic	Top-down	Bottom-up	
Te reo Only	9	7	10	6	3	13	16
Mostly te reo	6	2	7	1	2	6	8
Mostly English	2	1	3	0	1	2	3
English Only	2	5	7	0	6	1	7

4.1.2.2 Examples of photos from the linguistic landscape

Photo item 1, shown in figure 5, is an example of a **te reo only/permanent/dynamic/bottom-up** item, the whiteboard at the entrance of the centre that was mentioned at the beginning of the introduction. Three of the permanent dynamic items in the landscape were whiteboards, one at the entrance of the centre, one on the office door of the Kaihautū, and one on the wall in the centre with common phrases to use with the tamariki. The entrance whiteboard is regularly updated as a way of communicating with the parents. In this example it includes Te Rerenga Kōrero o te Wiki – the phrase of the week, and a welcoming to Matariki – a celebration of a cluster of stars that appear in winter that signify the start of the Māori new year.

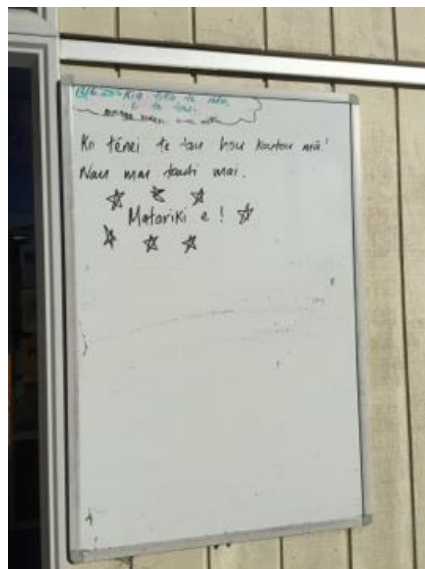


Figure 5: Photo item 1 - Whiteboard photo

Photo item 2, shown in figure 6, is an example of a **te reo only/permanent/static/top-down**, a smoke-free sticker written in te reo Māori on the glass at the entrance to the centre produced by Smokefree NZ.



Figure 6: Photo item 2 - Smokefree photo

The sign says “auahi kore – I ngā wā katoa” the English version of this sign being “Smokefree – at all times”.

Photo item 3, shown in figure 7, is an example of a **mostly te reo/permanent/dynamic/bottom-up**, the profile books displayed in the entrance way across from the open door of the office of the Kaihautū.



Figure 7: Photo item 3 - Profile book photo

The profile books are a record of progress for the tamariki. They include photos and learning stories of the tamariki within the centre, that the whānau can read and make contributions to. The books have a picture of the child on the front and the child's full name. They are there to be accessed by the child's whānau only. They are described by Kaiako A as,

Example 27 - A collaboration with the individual child and how they are progressing or how they are settling, as well as the group activities they do here (Kaiako A).

When asked if the Profile books were in both English and te reo Māori, Kaiako A responded,

Example 28 - Yes, and it is also about parents' preferences, because not all whānau can understand Māori or can read it. So for the parents' sake some of it will be in English, but we do a lot of our work in te reo Māori. But with that we also have parent teacher interviews, so that we can help explain whatever's been put in the book that they don't understand (Kaiako A).

In the Profile book there is a star chart that is sent home with the parents after the parent interview at the centre. The star chart has questions, for example;

- Does your child use te reo Māori at home?
- What do they say?
- Do they sing?

The intention of this is for the centre to get a picture of what the child is doing in te reo Māori in both environments, especially if the child is not using much te reo Māori in the centre. The centre has sometimes found that the use of te reo Māori can vary between the home and the centre.

Finally, the remaining items in te reo Māori and mostly in te reo Māori published from inside the centre were static displays of topics, whānau, learning stories, waiata and karakia. The items in English only and published from outside of the centre were mainly static displays promoting health and wellbeing, and official certificates and qualifications.

4.1.3 Technology landscape of the centre

Five physical technology items from the landscape were photographed. There was a printer, two television screens and a cd/mp3 player with speakers. Not visible in the landscape, but mentioned in the interviews were also an iPad, PlayStation and a digital camera.

The digital camera is used throughout the day to record what the tamariki are doing at the centre. Because parents were interested in what was going on in the centre, at the end of the day the memory card was inserted into the television and they would let the pictures of

the day continually run. Both kaiako said that it was specifically for the parents. Kaiako B says,

Example 29 - Parents would come and just sit down and just watch and the kids would be, “That’s [names child]” (Kaiako B).

She continued that it was also,

Example 30 - A transition thing. You know the child is having fun, or having fun learning alongside others. That manaaki.⁴⁴ Where you capture teina looking after pēpi (Kaiako B).

The centre has an Apple TV, which they used during Matariki during the data collection period to look at the planets and astronomy. Kaiako A used the iPad to,

Example 31 - Look at constellations so you can actually see space and look at the different planets and stars and things like that (Kaiako A).

Also, the children at the centre sometimes did fitness with PlayStation. Both kaiako expressed that technology was not something that they wanted to rely on. Kaiako B adds,

Example 32 - It’s always got to be changed, you can’t be reliant on that. You’ve got to take it back to old school sometimes (Kaiako B).

Kaiako A, shared a similar view.

Example 33 - I don’t think that we should be using it all the time. They should also know how to play outside and climb a tree and all those sort of things (Kaiako A).

The Kaihautū says that the use of technology in the centre was influenced by the kaiako.

Example 34 - It comes down to the knowledge of the kaiako that’s using it (Kaihautū).

About the centre iPad she says,

Example 35 - It’s just another tool that we can pull out for a certain activity (Kaihautū).

For example, it might be used for watching kapahaka⁴⁵ on YouTube, or for a specific activity which can be displayed on the larger screen. She expressed her belief that the children prefer to be active by saying,

Example 36 - They would rather their hands being goeey than be sitting attached to the screen (Kaihautū).

Sometimes they may play a movie or video, which may be in te reo Māori, in the afternoon if it’s a wet day, but she says,

Example 37 - As soon as they are all distracted, off it goes and they go do something else (Kaihautū).

⁴⁴ hospitality, caring

⁴⁵ Māori performing arts

4.2 The home environment

Data collected about the home environment was based on the descriptions from both whaea, this included a description of the linguistic landscape and the technology landscape. One interview was conducted at the centre and the other via Skype.

4.2.1 Policy and practice

Neither whaea mentioned in the interviews that they had any set policy in relation to how they used te reo Māori in the home. Both whaea shared similarities in that they were both learning te reo Māori alongside their tamariki and felt comfortable using te reo Māori within the centre, as opposed to out in the community. Whaea B did find that on the days they went to the centre they would use te reo Māori more at home.

Both whaea saw the centre as a source of learning te reo Māori, this included interacting with the tamariki attending, utilising the writing on the walls, and working at the centre. Both whaea also used technology for accessing resources such as music and television shows.

Both whaea said that they did have some rules at home around the use of technology, mostly in regards to moderating the amount of time their tamariki spent in front of screens, and in the case of Whaea B, not letting her two youngest tamariki use her Microsoft Surface.

4.2.2 Linguistic landscape of the home

Both parents were asked to describe the linguistic landscape of their homes during the interviews. Whaea A had labels in te reo Māori around the house, on things like the door, microwave, fridge and on the table. That was before their house was renovated. She said she thought the labels helped her and her eldest son. She said she had items from the centre in the house, such as paintings. They were used as a prompt for conversation in both English and te reo Māori with her child.

Whaea B, who was interviewed on Skype, was able to go around her home to describe the linguistic landscape. When initially asked, she thought there would probably be very little language in the linguistic landscape of her home, however she said at times they have had other languages displayed in the home.

Example 38 - I mean we have the Japanese books and my daughter has the Japanese homework and all that and she has flash cards and she is learning to write Hiragana at the moment. So she's got her flash cards but as far as displaying, I'm just looking in the kid's room, play room. We've got an English ABCD alphabet. And that is it. The rest of it is just their art. All in English with obviously their writing. But also she's just starting to learn to read so I have thought I need to start doing that with Japanese and with the reo, but otherwise no. It's all English. We have Japanese calligraphy because we have Japanese art in the house (Whaea B).

Whaea B had a couple of little books that she was using to improve her te reo Māori to use with her children, but nothing was displayed.

4.2.3 Technology landscape of the home

During the interviews both whaea were asked about what technology was available in the home. They were then asked how they used the technology in relation to language learning.

Whaea A said they had a laptop, an iPad air 2, PlayStation 3 and a television. She added,

Example 39 - I try to sort of balance it out and not rely too much on technology, because it could go either way for me. Positive or negative behaviour and it is just picking the right time, when they are in the right frame of mind to avoid meltdowns and squabbles between them (Whaea A).

She used strategies she learned from the Incredible Years Programme, a New Zealand parenting programme, such as giving a 5-minute warning to turn devices off and extending the gap between the times that her children have last used the devices. Her eldest child likes to look at the personal photos and videos they have taken on the iPad, and the Kaihautū of the centre found that with Whaea A's eldest,

Example 40 - His iPad is a real communication for him because he doesn't directly communicate with people, he can communicate through the iPad. You can get a lot more communication with him with the iPad (Kaihautū).

Whaea A has tried using video calling once before, but had technical difficulties and has not used it since. She adds,

Example 41 - It would be nice if there are apps out there that had te reo because it would be easier, even the days of the week and the months of the year (Whaea A).

She expressed an interest in apps for vocabulary building. When asked about music or television programmes in the home she said,

Example 42 - Whatever is on TV, whether it's a musical, we'd get up and have a little dance. I'd say "kanikani"⁴⁶ and we're all jumping around. Just basic stuff like that can get your child's attention (Whaea A).

Whaea B had two iPhones, a Microsoft Surface and a couple of televisions. On the Microsoft Surface they used books and YouTube for language learning. If there were songs that they liked, for example a Matariki song, they would use YouTube to find the correct lyrics. Whaea B used Bing translator, but mainly for her Japanese as she communicated regularly in Japanese. As a parent, she limited the amount of use her eldest child had on the Microsoft Surface,

Example 43 - Because she loves all that so she would go crazy on it (Whaea B).

⁴⁶ dance

Her eldest daughter used it for homework. Whaea B said she does not allow the youngest children to use it. They did watch the television together and YouTube on TV, especially for dancing.

Example 44 - I try and limit TV watching as well (Whaea B).

They used to also watch Māori television, Dora the explorer and Sponge Bob in te reo Māori. She continues to say,

Example 45 - We need to actually get one of those back on, especially now that [her middle child who attends the centre] is exposed to a lot more reo and they're starting to use it. I think that also inspires her older sister to want to speak it more. We'll get it back (Whaea B).

4.3 The online environment

An additional environment that is part of the centre's language ecology is the online environment. Data gathered within this environment was through internet searches, screenshots and the semi structured interviews with whaea, kaiako and the kaihautū.

4.3.1 Policy and practice

There were no official policies in regards to the online environment.

The centre had an official website, a Facebook page and used text messaging and email. To ensure privacy for the tamariki, the website had a login for users to access through registering first. This was where the centre posted images from the centre for parents to view. The Facebook page was an open group, therefore there were privacy concerns. The centre only used the Facebook page for emergency updates and did not post photos of the tamariki. This, however, did not stop parents from posting photos on Facebook of their tamariki.

Other online communication was via email and text messaging. Email was used to send an electronic newsletter, with a mix of English and te reo Māori. The level of te reo Māori varies as the priority was ensure that the whānau were comfortable by balancing the amount and level of te reo Māori and English.

Although not an official policy, the centre used text messaging to aid in the transition of new tamariki. When a child was settling into the centre they were able to send a photo via text messaging to help reassure whānau that their tamariki were fine. This has improved the transition process greatly.

4.3.2 Linguistic landscape of online

4.3.2.1 Website

In a Google search using the centre's name, the number one result was the centre's website. The website's heading was the centre's name and a photo of the outside area, which has been landscaped to reflect a Māori world. Below the photo was a menu which included the subtitles: Home, About the centre, About (an additional associated centre), Games & learning, Policies, Register and Contact. There were three rotating pictures on the main page of spaces inside and outside of the centre, which included the subtitles of Whanaungatanga, Tino Rangatiratanga⁴⁷ and Self-determination. The writing below was in English explaining the origins of the centre. There was also further explanation of the terms Tino Rangatiratanga and Self-determination. On the page with information about the centre there were external links to Māori Television, an online Māori dictionary and to a health business. There was also a login for users and a calendar. The Kaihautū says that around 40% of the centre whānau were registered users of the website.

Example 46 - People use the website a lot to find us and they do. They find us through that. But there's a lot in the back of the website that unless you actually register you don't actually get to see, and that's because of the Privacy Act. We've got photos of our tamariki on there (Kaihautū).

4.3.2.2 Facebook

The centre also had a Facebook page, which was used for more immediate communication. The Kaihautū, kaiako and whaea were all familiar with Facebook and used it for various purposes and to varying degrees, both professionally and personally. The Facebook page has been selected to be Artefact 5 and will be discussed in more detail in section 4.4.

Whaea A said she appreciated that Facebook allowed parents, who do not have the time, to catch up with the kaiako. Whaea A used Facebook personally to catch up with family through sharing photos. For Whaea B, when asked about Facebook she said she had not been using Facebook but always read the monthly Pānui⁴⁸ and any emails that were sent from the centre.

4.3.2.3 Email

The Kaihautū used email to send the Pānui and invoices for attendance fees to the whānau, and she said that she will often write the message in te reo Māori. She said she understood that not all whānau will understand the message, but said she believes that once they click

⁴⁷ absolute sovereignty

⁴⁸ Newsletter

on the attachment they will understand. If it was something essential for the parents to understand then she would write the email message in English.

The Pānui is a newsletter that includes notices, events, what the children have been doing at the centre, phrases in te reo Māori, and photos of the tamariki. When talking about the Pānui, the Kaihautū says,

Example 47 - It's in English and in te reo, mainly because it is a form of communication and the most important is that they understand. But we do put a lot of reo things in there as well, as again, if they were interested and if they find out what it meant, it is good they're getting to see their language in both. We have actually increased the amount of reo that we have put in the Pānui, we've not got to the point where we can do the whole thing in te reo (Kaihautū).

When discussing the Pānui, it prompted the Kaihautū to reflect on the centre's use of English and te reo Māori in a total immersion centre,

Example 48 - We are a total immersion centre, but we've always said that the most important thing is to make people feel comfortable, be able to communicate and feel understood. So, it's never been a problem to have non-speakers in here ever, that's not the way (Kaihautū).

That balance of te reo Māori and English is an on-going consideration for the centre, Kaihautū explains,

Example 49 - Keeping that comfortableness but also keeping the reo up is a bit of a see saw. It's definitely a balancing act and sometimes we go too far one way and we stop hearing the language in the centre. Then we have to go back to the other way and encourage parents to kōrero and remind them that, once they are through that gate it is an immersion centre, without making them feel uncomfortable. It's a bit of a balancing act and we don't always get it right, it's just sort of a never-ending goal (Kaihautū).

4.3.2.4 Text messaging

Another way the centre connected with the whānau was through text messaging. The Kaihautū and both kaiako mentioned that the biggest advantage of using text messaging, which they all had the capability of using their own personal phones, was in decreasing the amount of time to settle a new tamariki and whānau attending the centre.

Kaihautū says,

Example 50 - Settling a child isn't actually the child you are settling, it is more the parent. You get parents who are very emotional about it, and fair enough, I can get that. It is their child and their child is very, very precious. So one of the things we do when we've got children settling, we'll often take photos of them and just text them to mum and say, "Look I am having lunch" and, "Look I've had a nap" and things like that, so that she's got that connection. Parents so appreciate it. You get happy faces back and things, it is just to put them at ease. Often we say to parents to ring up, "You can ring up anytime you want just keep ringing, if you ring every 5 minutes, we'll understand." But if you send a text and a photo of them looking ok, it puts them at rest. It is so handy to do. Whereas previously, and I was around previously, we didn't have that capability. It was the phone call every 5 minutes and it was the parents coming in looking all worried and leaving in tears and things like that. If you can

put them at ease it makes a huge amount of difference to how the child settles, for us it's improved in how we can do a service (Kaihautū).

When talking about the parents' use of email or text messages to contact the teachers, Kaiako B talked about the connections the families have,

Example 51 - One person knows another person and that's how we know each other. You see the whānau out at sports and stuff so you've always got that connection. It's just making sure that our whānau are ok. The child transitions way better if the parent transitions better too. That is the whole thing of the wellbeing of whānau. We're one waka here so you've got to be on board or we don't move forward (Kaiako B).

The care for the wellbeing of the whānau is suggested by Kaiako B as being a two-way street. This means that a feeling of safety, trust and a sense of belonging at the centre was important for the staff as well as the children and whānau. Over the past 15 years there has been a very low turnover of staff.

Kaiako B says,

Example 52 - We are treated as equals, we've all got the same opportunities, it's just really what you make of it and we're fine with that. I think when you are looking at a hierarchy and moving up it's more Pākehā⁴⁹ designed positioning (Kaiako B).

When explaining how the different staff hold different levels of qualifications,

Example 53 - We are treated as equals and with respect (Kaiako B).

Respect is something Kaiako B said she believed was communicated through the tone of her voice and said tone was her main consideration with her language use within the centre.

Example 54 - It is the actual tone that is used to portray what kind of message you are trying to get out. It's tone and professionalism, because at the end of the day I am a teacher. If I am not going to talk to you nicely then what am I teaching you? Ask the Tuakana Teina, "What are you learning from me? Are you respecting others with your kōrero?" There is no love when you talk to some like that, emotionally it can deteriorate their wellbeing (Kaiako B).

4.4 The artefacts

Five artefacts were selected from the linguistic landscape from within the centre and online environment, to describe further. Selections were based on the recommendations of the participants, as they were seen as significant displays for supporting the language development in the centre.

⁴⁹ non-Māori

4.4.1 Artefact 1 – Poutama

Artefact 1 is the Poutama, shown in figure 8, used as a motivational tool for encouraging the use of te reo Māori in the centre. It is one of the most significant permanent, dynamic displays in terms of te reo Māori at the centre. For this reason, the Poutama has been selected as one of the Artefacts.

4.4.1.1 Policy and Practice – Achievement and togetherness

The word Poutama means;

The stepped pattern of the tukutuku⁵⁰ panels ... symbolising levels of learning and intellectual achievement (Māoridictionary.co.nz).

There are coloured steps on the Poutama that the individual can progress through starting with Kākāriki - kupu kotahi (green - one word), Kahurangi - kupu e rua (blue - two words), Kōwhai - rerenga kōrero (yellow - sentences) and Waiporoporo - rerenga kōrerorero (purple - speaking fluently). At each level a person can earn stickers, there are around four skills within each level to achieve before moving to the next level. Whānau are invited to join the journey of learning te reo Māori by putting their own photo alongside the photos of the tamariki.



Figure 8: Artefact 1 - Poutama display

⁵⁰ traditional Māori latticework

The Poutama shows the level of te reo Māori that an individual knows. This includes not only the tamariki, but their whānau, the kaiako, and kaihautū as well, displaying that everyone is on board together in their journey, learning te reo Māori. The metaphor of being on the same “waka” was used by Kaiako B when talking about the potential for the Poutama to display your own vulnerabilities to one another.

Example 55 - Yeah, definitely. It's that one waka. We all hurt, we all feel embarrassed, we're all learning, but we can all move faster and do things faster if we work together, kotahi te waka⁵¹ – that's it! (Kaiako B).

For Whaea A, when asked about her feelings about being on the Poutama she answered,

Example 56 - I'm quite happy for it [her photo] to be up there. It's not just involving our children; it's also getting the parents on board as well. It's doing things as a whole. It's not just doing it because your child goes here, it's not just for them. It's for everybody (Whaea A).

This sentiment that it was for everybody, was echoed by Whaea B,

Example 57 - We all have one goal for our children, not just your own child, but for all the children (Whaea B).

For Whaea B, she said,

Example 58 - I was quite happy with it because I thought that it helped justify if I wasn't answering people or if I was speaking back in English. It's like we are all beginners at some stage. I quite like that me and my children are doing the journey together, so all our photos are all next to each other on the bottom. I thought that was kind of cool, that they include us (Whaea B).

The benefit of journeying together with your own children was mentioned by both Whaea and Kaiako B as well.

Whaea A said,

Example 59 - Learning alongside with my children makes our relationship a bit stronger because I've learned with them (Whaea A).

Kaiako B said that when she started learning te reo Māori she would play the te reo Māori activities at home together,

Example 60 - I think the most rewarding thing for me was my daughter was totally interested. It was good for us as bonding and as well as learning (Kaiako B).

The Poutama is essentially used as an incentive. There are guidelines and a system for moving people up, through using a checklist and stickers.

Example 61 - There's about four things on the checklist where it goes from oral to listening and understanding. If they can check off all those on the list, they can move up to the next level and then the same carries on but it extends in sentences (Whaea A).

⁵¹ One waka

Whaea B says,

Example 62 - It's quite nice that you've got that little simple list of what you need to hit before you can go up a level (Whaea B).

Kaiako A explains the process of the Poutama,

Example 63 - As soon as any of them move up to the next level then they will get a certificate, a book, and they get to choose a prize from the prize box. That is to celebrate if one or many get to move up, it doesn't matter what level, we celebrate them all just to make sure that they know that it's cool to kōrero Māori and they are being encouraged and they are getting rewarded (Kaiako A).

It is an incentive as well as positive experience. The Poutama is also a way of getting everyone "on board" learning te reo Māori.

Example 64 - For whānau seeing their children achieve like that it often helps getting whānau on board (Kaiako A).

Parents were approached and encouraged to be a part of the Poutama. Kaiako B explains,

Example 65 - It's celebrating everyone's reo. It's emphasising that this isn't a place where you need to be whakamā and worry about what people think, because we are all on that board [the Poutama]. We are all there (Kaiako B).

As a part of the enrolment interview, whānau have to sign stating that there will be at least one person at home who can kōrero, which has varying success.

Example 66 - But if you don't do it, it becomes just a centre thing and they only kōrero when they're here and they only see it as something to be used here. Whereas that, that's not really ideal, you want it to be out in the public as well, in their home lives and home communities (Kaiako B).

4.4.2 Artefact 2 – Karakia

Artefact 2, shown in figure 9, is a personalised poster made for the tamariki to take home to their whānau which includes a photo of the tamariki, and the words to three of the karakia that they use throughout the day in the centre.

4.4.2.1 Policy and Practice – Tikanga and normalisation

For Kaiako B, who was behind the creation of Artefact 2, she says normalisation of both te reo Māori and tikanga is her the main drive at the centre.

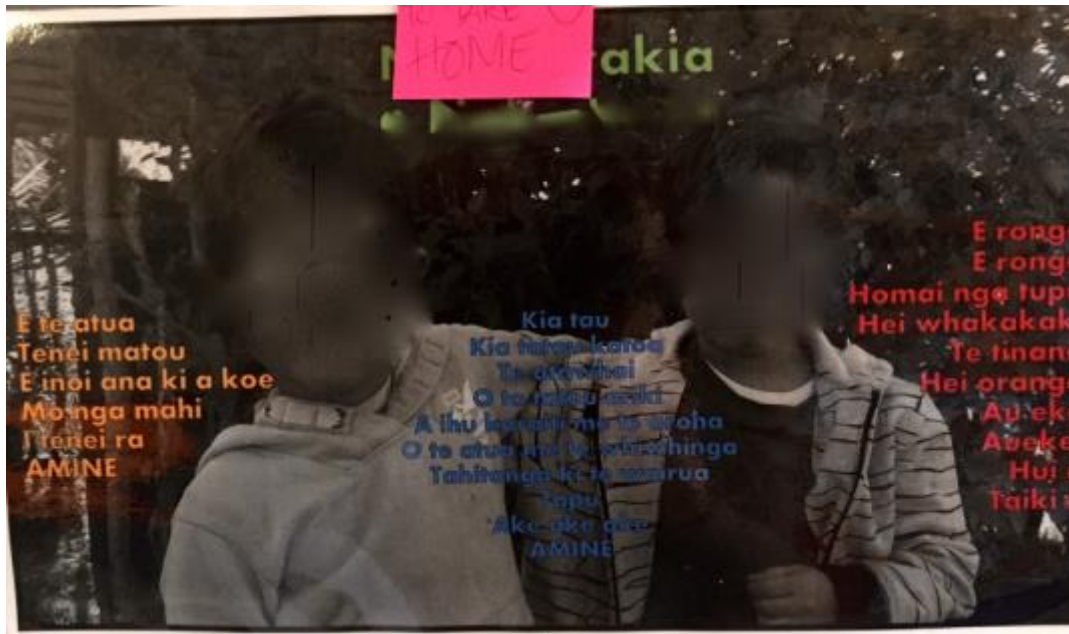


Figure 9: Artefact 2 - Karakia display

Kaiako B says the intention of Artefact 2 was,

Example 67 - Really just helping them [the children] pronounce the words properly. That was the reo strategy. So we thought about the whānau and we thought about the child. We thought it would be a good resource to have visible for them, like in the kitchen where they do karakia, three karakia for our day. And then having the child's photo on there, they're not going to throw it away. That was kind of the incentive for our whānau to jump on board, which they loved. Then we had a parent come in and say that "This is the one that we've been practising" You can actually see on the whāriki⁵² and the tables who is actually saying it now, compared to where they were before, you can hear (Kaiako B).

For Kaiako B she says,

Example 68 - Massively, a big drive while I work is to normalise the hearing of it and the speaking of it, it can pop up anytime and you can just go on your own waka (Kaiako B).

In addition, Kaiako A says that they used the child's photo,

Example 69 - So that the tamariki had that feeling of belonging, it is something that is theirs, it's something that they can cherish and keep at home as well (Kaiako A).

Both Kaiako A and the Kaihautū mentioned the same motivation as Kaiako B to normalise te reo Māori.

⁵² mat

Kaiako A said her aim is,

Example 70 - To make it feel more normal and everyday because not all of them [the children] get it [te reo Māori] at home. So just for them to come in here just to try to make it feel as normal as possible for the kids. Because we use te reo Māori for them and it does become a normal everyday thing, once they get into routine (Kaiako A).

Kaiako B has had experience of people that have only seen te reo Māori as necessary for the centre, she reminded herself that it is good that they are attending the centre,

Example 71 - But then if it's only here it's not normalising it, it's not going home and it's not being embraced there. So how are we supposed to teach children to normalise the language that's not there (Kaiako B).

For both whaea, they who both used te reo Māori with their children in the home, it was not something that they would use intentionally in the community. Whaea A said that sometimes,

Example 72 - It just comes out (Whaea A).

For her, being from both Māori and Pākehā worlds, where she was willing to use te reo Māori depended on the environment,

Example 73 - And that's where I think the confidence in myself being able to just say it freely without feeling like I'm being judged from this corner or judged from that corner. Building my confidence and going back one day. Those who thought less, then I can come back and I've got the trump card (Whaea A).

Whaea B said,

Example 74 - I probably wouldn't use "Haeremai"⁵³ in public, at the supermarket yet. I'm not quite there. I think because I would feel like a try hard maybe. Maybe it is the community I am in, if I was in a different community where there were more reo speakers I would probably feel more comfortable. Because I feel such a beginner, I'll use it around pre-schoolers but not the general public (Whaea B).

Whaea B continued to explain that, in the past, she did not identify with Māori culture and language. She said that she had a feeling of being quite separate, even with her friends who were never Māori, she said that she felt like she did not quite fit in.

Example 74 - Since I've been overseas and been exposed to more cultures I am recognising my Māori culture. Also, because I am a mother I want my kids to feel proud of it and be more a part of it than I was (Whaea B).

⁵³ Come here

4.4.3 Artefact 3 – Whakapapa

Artefact 3, shown in figure 10, is the whakapapa, a display of a tree which includes photos of all the whānau in the centre. The tamariki have a photo of their whānau which supports their sense of belonging, identity and te reo Māori.

4.4.3.1 Policy and Practice – Identity and belonging

Identity is a part of the purpose of artefact 3, the whakapapa, but also as a support for the children to learn their speeches to introduce themselves. Kaiako A explains,

Example 75 - We had manu kōrero⁵⁴ at [names the other centre] and it involved the entire kura, which meant this centre as well. What they wanted from us was to have our babies stand up, introduce themselves, their parents, their siblings, or pretty much their family members, their favourite colour, their favourite food and themselves. So for a while we had been getting our kids to stand up. So we got the family collages [photos] together so that it made it a bit easier for them and it really helps them in their confidence, in knowing themselves and their family, and to be able to stand up in front of everyone and just say. Which is a really big thing for our babies (Kaiako A).



Figure 10: Artefact 3 - Whakapapa display

⁵⁴ Speeches

When Kaiako A was asked if language was a part of building identity and confidence she said,

Example 76 - It's a massive part of what we do (Kaiako A).

Example 77 - You've got to have that sense of belonging and wellbeing to be able to really fuse it together otherwise you kind of feel like a lost soul (Kaiako A).

This feeling of loss was echoed by Kaiako B when talking about the whakapapa of her own tamariki,

Example 78 - That tikanga is massive, whakapapa, just for where he [referring to her youngest] is from, it's massive. Growing up without it I see the necessity for it. Whereas, sometimes my husband doesn't because he has had that luxury, and that is the taonga, it can be as much materialistic. But when it is all gone, it is stripped (Kaiako B).

Referring to her husband's whakapapa,

Example 79 - His whakapapa is just so detailed that it's inspiring, for me it is something that I want for my children and we've agreed we want it for them as well (Kaiako B).

When referring to the Whakapapa display Whaea B said her child has,

Example 80 - Got her mihi⁵⁵ up at the moment. I don't even know my mihi so I am looking at theirs and breaking it down and kind of realising what's going on (Whaea B).

The desire for their children to have what they did not, was shared by both whaea interviewed.

The Kaihautū is cautious about the level of detail the pepeha⁵⁶ goes to, this caution highlights the need to question "Who is the pepeha for?" She illustrated the example of parents wanting their tamariki to learn their mountain and their river, when perhaps tamariki have no direct experience or knowledge of those things, and the deeper meanings connected to it. The question of who it was for was raised by both kaiako who shared experiences of being made to "perform" waiata, or made to kōrero in te reo Māori in situations that did not feel natural or comfortable for them when they were children.

This is something that Whaea B feels strongly about when parents are expecting their children to use te reo Māori but not normalising it with the use of te reo Māori within the home. She used terms such as "it's not a show" and "it's not a showcase" when referring to her own experiences of being made to speak and perform in front of others. Her response to children whose parents are pushing this situation is "kia kaha"⁵⁷, and she emphasises how this type of behaviour does not make a child feel welcome.

⁵⁵ introduction

⁵⁶ tribal introduction

⁵⁷ be strong

4.4.4 Artefact 4 – Te Rerenga Kōrero o te wiki

Artefact 4, shown in figure 11, is a downloaded resource that has been printed and displayed in the centre. This resource is available for free and accessible to anyone.

4.4.4.1 Policy and Practice – Te reo Māori as an oral language

Te Rerenga Kōrero o te Wiki is a digital resource produced by the Māori Language Commission as a way of assisting the public on how to pronounce phrases. Its literal translation in English is “the phrase of the week”. It is a free resource which can be downloaded from <http://www.tetaurawhiri.govt.nz/> and printed. It is essentially a new phrase introduced each week, and includes commonly used phrases. This resource includes and MP3 audio file that can be accessed through the QR code on the poster. The audio file contains the phrase spoken in te reo Māori followed by the meaning in English.



Figure 11: Artefact 4 - Te Rerenga Kōrero o te Wiki photo

As previously mentioned, the Kaihautū says she believed that the phrases and words on the walls acted as a reminder to the teachers to use the words and as a way of initiating conversation with parents about te reo Māori and their own language learning journey. Both whaea were aware of this artefact within the linguistic landscape however neither whaea was aware of the additional QR code that linked to the audio file. Both whaea said at some stage of their interview, that hearing te reo Māori helped in their ability to learn and

use te reo Māori, the rhythm in particular. The QR code presents an opportunity for the parents to have access to hearing the language, as both parents had smartphones with the ability to download a QR scanning app. Whaea A knew about scanning QR codes but had not used them adding,

Example 81 - So that's how behind I am (Whaea A).

Whaea B had not used the QR codes but thought it was,

Example 82 - Good to know (Whaea B).

The addition of the QR code adds an aural element to the linguistic landscape through the assistance of technology. This may be appealing as it requires no literacy skills; it is simply a scan function on a device. The addition of an aural aspect is a significant element that may suit the methodological practices of Māori well, as Kaihautū explains,

Example 83 - Māori is an oral language to start off with. It really is the hearing of the language. The thing that we do the most as a group is the Te Ataarangi lessons, and that's not written word either. When you know you are not going to have a written prompt and you have to listen, you take it in because you know you have to. You've got to hear and you've got to absorb (Kaihautū).

Te Ataarangi lessons were lessons that the staff of the centre participated in. Te Ataarangi used a methodology using Cuisenaire rods as a learning tool to encourage the speaking of the te reo Māori.

The phrase of the week is also sent home in the newsletter for the parents. Through the QR codes, the item from linguistic landscape has the potential to transfer from being a visual only resource to a spoken language resource through the use of technology.

4.4.5 Artefact 5 – Facebook

Artefact 5, shown in figure 12, Facebook, is an online social media platform that is free to join and is used for sharing photos, updates, events and includes functions such as instant messaging and video calling.

4.4.5.1 Policy and Practice – Interaction and connection



Figure 12: Artefact 5 - Facebook screenshot

The Facebook is an open account, which means that people that are not enrolled in the centre may also join. Due to privacy and security issues the centre does not post photos on the page. Even though the centre had an informal policy of not posting images of tamariki publicly, it was a platform that could be used by whānau and kaiako to share images privately. The page does not restrict the parents from posting photos on the Facebook page themselves, and this may sometimes include images of other people's children. The Kaihautū implied that this can be a bit tricky, but as a centre they suggest to the parent posting that they should notify the other parent.

Example 84 - Often parents will just directly communicate, many of our parents are very aware of the Facebook photos and things like that. But, then saying that, the majority will put photo up of their kids anyway. Putting up any security is quite hard, that's why our Facebook account doesn't get used as much because we don't use it for that, it is really just for emergency (Kaihautū).

The centre has considered making it a closed account in the past, but their conclusion was that any photos posted could still be shared by those whānau belonging to the group and the privacy and security is not as good as they would want it to be.

A secondary benefit of the Facebook account is that it allows further connections to be made between the parents and teachers and the between the parents. Being a member of the centre Facebook page, you can add other members as friends, creating connections online.

Kaiako A says,

Example 85 - I'm a part of the [centre's] Facebook page. I've got all the kaiako as my friends, I've even got some of the mātua⁵⁸ as friends as well. I've made a lot of really good relationships with the parents over the last few years (Kaiako A).

Having the teachers and parents as friends on Facebook allows them to see each other's personal page.

Kaiako A,

Example 86 - Seeing my updates and things like that, and if I have photos of their tamariki I'll either private message them or just post it on to their page instead of mine (Kaiako A).

⁵⁸ Parents

5: Analysis and discussion

5.1 Waka of needs

Maslow's hierarchy, when inverted, creates what resembles the shape of a waka. Modifying the hierarchy creates four main characteristics that differ from Maslow's hierarchy. In the waka of needs, the waka considers the needs of the community as a group, is mobile as opposed to fixed, has no distinct separation between the needs within the waka, and is based on self-actualisation. The analysis of the data will utilise this modified version of Maslow's hierarchy to discuss the kōrero of the Kaihautū, kaiako and whaea in order to understand the policies and practices that strengthen the needs of those inside the waka.

In relation to the linguistic landscape, most of what was gathered from the linguistic landscape can fit inside this waka, either directly or indirectly. A focus on strengthening what is within the waka, physiology, safety, love and belonging, esteem and self-actualisation, could be recognised in the interview data as informal policies and practices associated to the linguistic landscape. This strengthening of needs could be viewed as strengthening the waka itself, so the that waka can move forward. This is relevant to the revitalisation and goal of normalisation of te reo Māori.

Example 87 - We're one waka here so you've got to be on board or we don't move forward (Kaiako B).

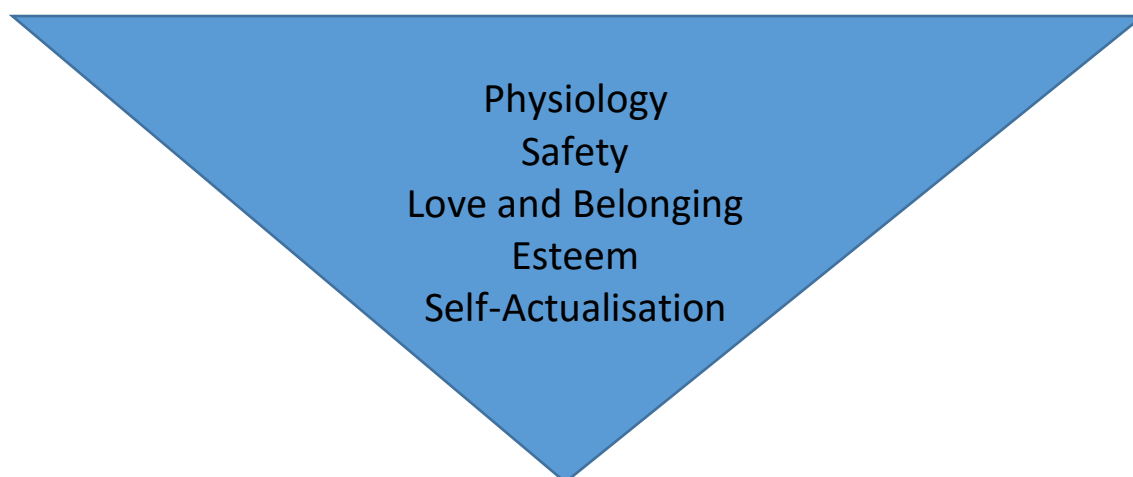


Figure 14: "Waka" of needs – a modification of Maslow's hierarchy of needs

5.1.1 The waka as a community

The waka is based on the needs of the community as a group, with the individuals and their individual needs within the waka itself. This evokes the idea that converts Maslow's hierarchy, which is to be applied to individuals, into a context which references the importance of the community as a group. For Māori, this importance placed on the community, as opposed to the individual, can be recognised in the use of the term whānau when referring to a group of people that share a similar goal or interest. This creates a distinctive hierarchy for a community where, in this instance, the whānau is kaupapa-based (Taiapa, 1995).

The use of the term "waka", or references to being on board with te reo Māori as the kaupapa, was a metaphor which was common in most of the interviews in this study. The use of metaphors in Māori has been explored by King (2007). She found that "language as a canoe" is one of the top four metaphors used by newly fluently speakers of Māori, and suggested that this expressed a strongly held worldview that enabled them to "maintain a relationship with te reo Māori" (p. 1). Although in King's study the canoe had many different interpretations, in the situation at the centre in this study, the reference to the waka referred to being on board, in it together and moving forward.

5.1.2 The waka as mobile

The term waka creates an additional concept that there is mobility, and as a whole it can move in infinite directions at various speeds. It represents that learning te reo Māori, both as individuals and as a group, is a journey. This concept of a journey was even still relevant for Kaiako A, a te reo Māori speaker who felt more confident in te reo Māori than she did in English. It is also significant for the Kaihautū, as the literal translation for kaihautū is navigator, which is reference to the nautical nature of the journey as a community.

Much like the revitalisation of te reo Māori, this waka has at times surged ahead, and sometimes it has regressed when the force of the current became too strong. To make any progress, it requires everyone to be on board, working together, where the wellbeing of everyone inside the waka is a priority, so that there is strength in the waka as a whole. To be physiologically optimal paddling the waka, safety, connection, esteem and self-actualisation are all needed, and to have those needs met requires connection to one another, otherwise the waka is sure to be at the mercy of the current.

5.1.3 The waka as interconnected

There are no lines between each need to separate them in the waka. This is a subtle, but intentional adjustment. Similar to Te Wheke, the octopus model of Māori wellbeing, the needs within the waka are more interconnected than Maslow's hierarchy. The image of the

octopus has the whānau and tamariki as the head. The dimensions of wellbeing, illustrated as the arms of the octopus, give sustenance to the octopus as a whole. There is no lineal progression through the needs as the needs are interconnected and related to one another. An example of this may be for English language speakers learning their heritage language. Learners may have their physiological needs met, have strong connections and relationships, but may experience the feeling of being socially threatened, or feel judged for being unable to speak the heritage language of the whānau.

5.1.4 The waka as based on self-actualisation

As an individual, it makes sense for physiology and safety to be at the base of the hierarchy. However, when the view is expanded to include the community, it is possible to see that the individual's physiology and safety are only possible through the connections they have to the community as a group. A disconnected individual becomes more vulnerable, both physically and emotionally. As a community waka, the wellbeing of individuals and the group is based on the aspirations of the self-actualised individuals. The aspirations of the self-actualised individuals that have created the waka, have shaped the policies and practices, and have created opportunities for the individuals to develop esteem, love and belonging, safety and physiological needs. It is the self-actualisation that forms the base needs of the community as a group. Meeting the needs of the community, is to obtain a level of te reo Māori that begins to connect with the the of physiology and safety of the individuals, as te reo Māori becomes a home comfort and a food that gives nourishment.

5.2 Physiology

1. Biological and Physiological needs - air, food, drink, shelter, warmth, sex, sleep. In addition, the waka of needs considers the importance of physical movement, communication as a physiological process, communication for the formation of social bonds to meet physiological needs, and communication for physiological regulation.

He aha te kai o te rangatira, he kōrero, he kōrero, he kōrero.

This Māori proverb can be translated as 'The food of the chiefs is oratory'. This proverb connects communication to the nourishment of physiological needs, similar to the nourishment we need from food, air and water. The imagery the proverb elicits is that the language that gives strength. Communication may not be a physiological necessity, such as the fundamental necessity of food, but communication is a physiological process. Communication occurs within our bodies through a sophisticated coordination of muscles, vocal chords and breath. Through the study of neuroscience, the connection of our language to our physiologies has been explained further by Porges (2001). He proposes the evolutionary design of the communication system essentially stems from the physiological need to form social bonds through social engagement, a mammal's way of regulating the social relationships that they need for survival (Porges, 2001). His theory illustrates a dynamic process where social engagement forms bonds, social bonds calm the physiological

state where safety is perceived, and then the calm physiological state promotes social engagement. An on-going feedback loop.

In terms of Maslow's hierarchy of needs, physiological needs such as air, food, drink, shelter, warmth, sex, sleep, are not directly connected to the communicative system and language. Yet, as humans we are born completely dependent on others to meet our physiological needs, which are negotiated through vocalization; whether it be cries of joy or cries of hunger. Communication is an important physiological tool. It is beyond this thesis to explore if communication, and therefore language, is a physiological need. However, it could be argued that communication, in this case language, is indeed necessary to have our physiological needs meet.

Incorporated into this linguistic landscape is the presence of technology and the online virtual landscape. Technology and the online world itself are removed from the physiological needs of humans, but it is important to consider how technology may possibly impact on the physiological needs in the ECE setting. Not mentioned in Maslow's hierarchy, but discussed here in the waka of needs, is the physiological need to move and be physical. This is an addition that is considered here as a part of the analysis. As Kaihautū explained in her interview, the children would rather be playing as opposed to sitting in front of technology (example 6). Both kaiako and whaea made references to the use of technology with children as something they considered a tool for learning, but both stressed the need for balance in the use of technology (example 33 & 39).

A review of research into the study of sedentary behaviour in children aged between 2-18 years, Pate, Mitchell, Byun, and Dowda (2011) found there was a correlation between the amount of sedentary behaviour and technology use. There were indications that parental rules over the use of screen time had some influence over the amount of screen time the children had, generally as children got older their screen time and sedentary behaviours increased. The researchers suggested a more longitudinal study would be needed to see if increasing parental control over screen time would affect sedentary behaviour. Parental control was something discussed with both whaea. Both whaea in the interviews suggested they had struggles with limiting the screen time for their children. Whaea B said that she had to remove the device because of the battles she was having and limited it with her child because they could "go crazy on it" (example 43). Whaea A said it could go "either way" (example 39), stating that the outcome of the device use was either positive or negative.

5.3 Safety

2. Safety needs - protection from elements, security, order, law, stability, freedom from fear. In addition, the waka of needs considers emotional safety in a broader sense, such as freedom of shame and judgement of the social self, the use of tone in communication, and economic safety.

Maslow (1954), explains that freedom from fear is a need to be met to progress to the next level of love and belonging. In a child's case, the experience of fear does not have to be a direct threat, but can be due to being in a new or unfamiliar setting,

Confronting the average child with new, unfamiliar, strange, unmanageable stimuli or situations will too frequently elicit the danger or terror reaction, as an example, getting lost or even being separated from the parents for a short time (Maslow, 1954 p.86).

Developing a sense of emotional safety was often referred to in the interviews with Kaihautū and the kaiako, as there were many references in the interviews to making whānau feel comfortable, welcomed and ensuring that they did not feel staff were judgmental. This was not only in the physical space at the centre with face-to-face interaction with tamariki, but it was present in the artefacts on the wall, the interactions with the parents, the newsletters and in the profile books of the tamariki. One important practice, that would build a sense of safety for both child and the parent, was to text photos of the tamariki to parents who were new to the centre. They found that ability to do this had greatly improved their service.

One way of creating a sense of emotional safety expressed in the interviews, was the use of tone when using the language. The importance is placed not so much on what is said, but how it is said in example 54. Whaea A acknowledged the potential damaging emotional effect of the way people speak to one another.

Whaea and kaiako shared emotional experiences of situations where they felt judged, especially for being only a learner of te reo Māori, but also of being fluent such as Kaiako A sharing that she felt like the "token" Māori in her early childhood training course. The emotional aspect was of significance to both whaea as they both express feelings of being uncomfortable using te reo Māori outside of the centre, for fear of being judged or looking like a "try hard" (example 74). The protection of the social self is a significant need to consider, as any threat via judgement or shaming can produce physiological responses. Research into the physiological responses to any threat to the preservation of one's "social self" triggering the emotion of shame (Dickerson, Gruenewal & Kemeny, 2004), may cause psychobiological changes.

These psychobiological changes within the body may trigger the withdrawal and disengagement behaviours observed in people experiencing shame (Dickerson et al., 2004). This behaviour was expressed by Kaiako B as she explained that not being able to understand and speak te reo Māori made her "whakamā" (example 11) and "whakaiti" (example 12) herself. She felt shame and then she began to make herself small and withdraw.

The complex reaction of disengaging and withdrawing may be a combination of many things, two presented here are reactions to the new and unfamiliar, and the reaction to being judged socially. Despite having a sense of love and belonging with family, to have a loss of your heritage language may create a complex mix of emotions, that do not neatly fit into Maslow's hierarchy, as judgement from the community you belong to is a mix of physiological, safety, sense of belong and esteem. This feeling of judgement was expressed by Whaea A, who alluded to experiencing it within her home community when she was growing up, when she made the comment about returning one day to the whānau and having "the trump card".

Example 88 - And that's where I think confidence in myself being able to just say it freely without feeling like I'm being judged from this corner or judged from that corner. Building my confidence and going back one day and those who thought less, then I can come back and I've got the trump card (Whaea A).

In her comments she indicates that there may be a connection between her confidence in te reo Māori and her esteem in her home community, when she refers to having the "trump card". To be free of judgement, is an important aspiration expressed for her own tamariki. This sense of being judged may be particularly heightened for those who do not have the heritage language of their family or community, therefore an important need for their own tamariki.

In their interviews, both whaea expressed that the centre was a place where they felt confident to use te reo Māori while they felt less confident using it in the community. Whaea B said that it might be different if more people in her community spoke te reo Māori. This connects to the centre's aim to normalise te reo Māori. When te reo Māori becomes an everyday thing, it is no longer perceived as a novelty, something strange, or something to be judged for. The linguistic landscape is related to the perceptions of power, therefore the linguistic landscape may also have a connection to a perceived sense of social safety, which may support a perception of reduced judgement about speaking te reo Māori outside of the centre.

Economic safety was another aspect raised by Walker (1993), in relation to regeneration of language and Maslow's hierarchy. When communities are experiencing economic challenges, there is a shift to seek employment which weakens the ties to the culture and language. Whereas previously, families may have been able to live in locations closer to extended families or had the means to have one parent remain in the home. It is only when economic safety has been achieved that attention is placed on strengthening connections. The Kaihautū is also aware of the strain economic demands have on te reo Māori in the home. She explains that although on the enrolment sheet parents sign, it agrees that there will be at least one person in the home that can kōrero, she acknowledges that whānau whose tamariki attend the centre are busy working.

5.4 Love and Belonging

3. Love and belonging needs - friendship, intimacy, affection and love, - from work group, family, friends, romantic relationships. In addition, the waka of needs considers technological connections and *kanohi ki te kanohi*.

The Kaihautū and the kaiako all referred to the attending tamariki and their whānau as their own whānau (examples 51 & 64). This strength of connection to one another may support the feeling of safety, love and sense of belonging for the tamariki and whaea attending. Many of the artefacts in the linguistic landscape had been made from within the centre which is intended to nurture a connection between the whānau attending the centre. The potential to do this has expanded through the use of technology.

Three artefacts, from the linguistic landscape and made by the centre itself, were identified by the kaiako in the interview as contributing to strengthening the sense of belonging and connection needs. They were artefact 1- the poutama (4.4.1), artefact 2 -the karakia (4.4.2), and artefact 3 - the whakapapa (4.4.3). A similarity that these displays shared is that they all included photos of the tamariki. The power of the images of the tamariki and whānau to connect more visually to the display, and therefore with the language, was utilised by the kaiako in creating language resources for the home. In her interview Kaiako B explained that the presence of the image of the tamariki made it more likely for the image and the language to be displayed in the house.

This significant motivation to connect with the images could be explained through the Māori term *kanohi ki te kanohi*.

The social meaning of the phrase emphasizes physical presence and even a sense of commitment, to whānau (family), to a place, to a kaupapa (purpose). Kanohi kitea is a similar notion, meaning “the seen face” highlighting the importance of “being seen” to strengthen relationships and one’s place of belonging in the community (O’Carroll, 2014 p. 441).

In the case of artefact 2 – the karakia, using the child’s image within the linguistic landscape not only strengthened the connection to the centre, but also to connection to the language represented on the image, which was intended to be displayed in the home. This motivation to connect to the images of the tamariki was also relevant in the online setting. In O’Carroll’s study (2014), exploring the concept of *kanohi ki te kanohi* in a virtual setting, it found that,

Many Māori of the diaspora are actively seeking and using virtual media to make and maintain strong connections with their hau kāinga⁵⁹, despite being physically dislocated from them (p. 452).

The centre utilized technology to develop strong connections between the centre and the home, through the use of email, text messaging, their website and Artefact 5 - Facebook. It appeared that there was little technology used directly with the children, and the centre had no official policy about the use of technology. It was the practices and beliefs held by the staff that formed aspects that could be considered an unofficial policy. This unofficial policy was to use technology as another tool for teaching and to balance the use of

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technology, as the child would most likely prefer to play. Understanding how the centre used technology to strengthen the sense of belonging and connection showed how technology can be used to satisfy the needs of those within the waka, and how it is used to help the waka move forward.

There were many references in the interviews to the strength of the relationships within the centre, as well as outside of the centre through activities such as sports and work. This includes the connections made through Facebook, as Kaiako A had mentioned that she had whānau from the centre as friends on her Facebook, and all of the kaiako as friends. The concept of togetherness was a familiar theme in relation to learning te reo Māori. Both whaea, and Kaiako B whose tamariki attended the centre, all spoke of the rewards of learning along beside their tamariki. This learning alongside, was also referenced in the Kaihautū interview when she talked about the centre training as a team with Te Ataarangi language learning programme. Kaiako B, also explained her thoughts about everyone in the centre being treated as equals. This is reflected in the poutama display, where the photos of the tamariki, whānau, kaiako, and Kaihautū, are on the poutama together, reinforcing in the linguistic landscape that they are all on board together and they all belong.

The sense of belongingness was fostered through the linguistic landscape. It is clear to see the tamariki and their identity were a part of the centre through seeing photos of them within the linguistic landscape. This was reinforced through each child's profile book with their photo and name prominently displayed at the entrance of the centre. The importance of belonging and wellbeing was articulated by Kaiako A.

Example 89 - You've got to have that sense of belonging and wellbeing to be able to really fuse it together otherwise you kind of feel like a lost soul (Kaiako A).

5.5 Esteem

4. Esteem needs - achievement, mastery, independence, status, dominance, prestige, self-respect, respect from others. In addition, the waka of needs considers the connection to the group, being on board together, and the connection to the language for generating esteem, both for the individual as well as the group.

A sense of belonging, in terms of Maslow's hierarchy, is necessary before progressing to the next level of personal needs, esteem. Without a sense of being loved and belonging then the person is not able to move on to the self-esteem. Achievement in te reo Māori was a priority for all kaiako, which they used the displays on the walls to support the learning of the tamariki, as a way of scaffolding. An example of this is Artefact 3 - the whakapapa used to assist the tamariki for their manu kōrero. For the centre, it was important for the children to stand up in front of everyone and give their pepeha about the things that expressed who they were. For Kaihautū it was important for the pepeha to be relevant to the tamariki, so items related to the pepeha, such as the mountain, iwi, or river, sometimes were omitted. The reasons for omitting aspects from the pepeha were that the tamariki may not have had first-hand experiences of these places. Instead of the mountain and rivers, the centre chose to include in the pepeha items that were of personal significance to

the tamariki. In discussing these aspects during the interviews, it raised the question “who is the reo for?” It was clear from the interviews with the centre Kaihautū and kaiako, it was important for the te reo Māori to be for the tamariki. In that way, when they stand in front of an audience and do their pepeha, the language is able to deeply resonate with who they are, eliciting a sense of pride, achievement, respect and self-respect.

Both kaiako shared experiences of being shamed by being forced to perform or speak te reo Māori in ways that were not appropriate or comfortable for them. It highlights the importance of respecting a person’s mana reo⁶⁰. Kaiako B shared that she has also encountered parents who will get their tamariki to speak te reo Māori in front of her as a way of showing off. She expressed empathy for tamariki in that situation and will respond to the tamariki with “kia kaha”.

Overall, the language in the linguistic landscape served as a strong reminder that the physical space of the centre is an authentic environment for using te reo Māori. The landscape also supports the needs of the individuals as well as the group, through respecting the naturalistic use of te reo Māori. The linguistic landscape contributed to normalizing te reo Māori and therefore respect for everyone’s own way in which they were willing to use it.

Artefact 1 - the poutama was particularly designed to focus on achievement, where any step taken to progress was publically celebrated and rewarded by the centre. The intention of the recognition is to reinforce to the tamariki to feel pride in their abilities to speak te reo Māori and reinforce to them that it is “cool to kōrero” (example 63). Within the poutama, the photos of the tamariki, kaiako and whānau were all together, therefore generating a respect for others for being on the poutama and an acknowledgement of others achievements, no matter where they were on the poutama.

This “being in it together”, was expressed by Kaiako B, who expressed that all of the staff were valued equally and that a hierarchy in the centre did not exist. Everyone had the same opportunities, and each teacher was empowered in different ways. This absence of hierarchy shows those in the waka are not acting as individuals, but everyone is in it together as a part of the group. This highlights that it is not only the esteem of the individuals, it is the esteem of the group as a unit that is also a need that is interwoven.

⁶⁰ communication

5.6 Self-Actualisation

5. Self-Actualization needs - realizing personal potential, self-fulfillment, seeking personal growth and peak experiences. In addition, the waka of needs considers self-actualisation as a driving force of the waka.

In the interviews with kaiako, they both articulated a clear passion for what they were doing, with their aspirations not only for the tamariki, but for themselves personally, their own tamariki and te reo Māori and tikanga in general. This demonstrated that each kaiako shared a sense of higher purpose with their work in the centre. Their work within the centre was driven by their own personal experiences and passion for normalising te reo Māori. Kaiako A expressed it as a “whānau comfort” for her (example 4), and Kaiako B expressed that growing up without it affected her sense of self so that when she did start to learn te reo Māori she progressed quickly because she “wanted it so badly” (example 13). For the Kaihautū she expressed it in saying that they are normalising te reo Māori because “this is who we are” (example 3).

There was a sense from the interviews that the kaiako were both realising their personal potential in the environment of the centre, both having shared that it is something they have always wanted to do. They were empowered to develop their own resources for teaching, such as the karakia, poutama, and whakapapa, that supported the processes that were in alignment with the higher aspirations of the kaiako and kaihautū, that of normalisation, tikanga, connection, belonging, love, and achievement. This shares similarities to the development of the Te Whāriki policy that was founded on the aspirations for children (Ministry of Education, 1996).

Although self-actualisation is at the apex of Maslow’s hierarchy, in the waka it is at the base of the waka. Clearly, from the processes discovered to be behind the displays within the linguistic landscape of the centre, it is the energy stemming from the desire for self-actualisation, not only for the individual but for the people, that generates the energy and processes for nurturing the needs of others within the waka. Rather than the individual’s needs, it is the needs of the community that the self-actualisation is tending to.

6: Conclusion

The linguistic landscape is the visible expression and salience of the languages in a physical space. This visibility and salience reflect the language policies and language use in the environment. This study examined the linguistic landscape of three environments, the centre, the home and online, to understand the language and technology policies and practices within a Māori immersion ECE centre. These three environments created a language ecology, where each environment interacted to support the life of the language. Photographic data was collected from the centre and five photographed artefacts were selected as the basis for semi-structured interviews with the Kaihautū, two kaiako and two whaea.

This study found that apart from following the Te Whāriki policy, the centre had no official policy in regards to how language was used within the centre. The Kaihautū attributed this to the centre aiming to normalise the language (example 3). Many references to normalisation were made during the interviews (examples 5, 66, 68, 70 & 71); this supports the conclusion that normalisation was an informal policy of the centre. Many of the practices to achieve normalisation were through the centre strengthening their connections with the whānau.

The primary purpose of the linguistic landscape in the centre was to connect with whānau (examples 15, 19, 20, 23, 84 & 85). The purpose of this is to support the whānau in using and normalising te reo Māori within the home. The linguistic landscape worked in a number of ways, initiating conversations about staff members' own journey learning te reo Māori, displaying what the tamariki had been doing in the centre, introducing the Māori language, but mostly it was to get whānau on board. The reference to being on board, in it together, and being all in the one waka, was made frequently in the interviews (examples 55, 56, 57, 58, 64 & 65). Kaiako A's words 'ko tahi te waka' signifies that if everyone is on board then the waka moves faster (example 55). The centre encouraged whānau to be on board with learning te reo Māori through practices which created a safe emotional climate, free of judgement, which encouraged a sense of belonging (examples 76 & 77) and connection with one another.

The emotional climate of the centre was a priority for the Kaihautū and the kaiako, who all indicated that making the whānau feel comfortable and welcome was the most important. This informal policy of prioritising the emotional needs and wellbeing of the tamariki and whānau, interwoven with language, was articulated by Kaiako B,

You are looking after their wellbeing and the reo is what is being learned.

For the whaea in the interviews, the centre was the place where they felt comfortable to use te reo Māori and felt a sense of being included as they were learning alongside their tamariki (examples 7, 8, 9, 59 & 60). Supporting the emotional needs for safety and a sense of belonging could be seen as the underlying intentions of the displays in the linguistic landscape of the centre that were made by the kaiako.

The number of displays on the walls in te reo Māori made by the centre (bottom-up) outweighed the number of displays on the walls made from outside of the centre (top-down). Through the creation of their own displays in the linguistic landscape, the displays were personalised. The centre used images of the tamariki in many of the displays. The technology also allowed the centre to text message images and post images on the website. Utilising the power of the images of the tamariki, and interweaving the language was a way of connecting with the whānau. This was visible in many of the centre displays, especially three of the artefacts, artefact 1 – the poutama, artefact 2 – the karakia, artefact 3 – the whakapapa, and in the online environment. The power of the image of the tamariki could be connected to the concept of *kanohi ki te kanohi*, and important aspect of te reo Māori as an oral language.

Te reo Māori is primarily an oral language; the linguistic landscape was found to serve as a reminder for the kaiako, and learning material for whaea, so that they could use it to help them to transfer the language from the walls of the centre to the ears of the tamariki. This focus on listening was reinforced by the use of story and waiata in the centre, which reflects the traditional pedagogy of te reo Māori. It raises the question as to whether the use of technology can support the traditional methodologies of teaching te reo Māori as an oral language.

The technology was occasionally used as a tool in the centre. Both kaiako said it was important to keep a good balance (examples 33 & 39), that you cannot be reliant on it (example 32) and that the tamariki still prefer to play (example 36). The unofficial policy on technology was it was up to the kaiako who was using the technology (example 34). The biggest benefit gained from using technology was in transitioning new tamariki to the centre, by being able to text message photos of the tamariki to the whānau, which improved the transition experience for both tamariki and whānau. Both whaea had a range of technology in the home that they both tried to balance with other activities for their tamariki. Both whaea had expressed some difficulties with managing their children's behaviour when it came to technology use; both whaea had rules around limiting technology use. This view of needing to limit access to technology for tamariki was expressed by the Kaihautū and kaiako as well. Based on the interviews, it would seem that there was a strong emphasis, in the centre and at home, on play, singing and interaction. Both the Kaihautū and the kaiako said that the technology was not used often, and only as a teaching tool.

It seems that there is a lot of potential in using technology to connect with the whānau to increase their connection to and exposure of te reo Māori, supporting the centre's aim of normalisation of te reo Māori in the homes. It seems that the personalised content, such as photos of the tamariki and allowing the whānau to join in with the learning of their tamariki, connected more strongly with the whānau. Understanding this allows practitioners to explore how they might proceed with enhancing their linguistic landscapes, both through the displays on the walls and through technology via the website, text messaging, emailing or Facebook.

The linguistic landscape was a reflection not only of the policies and practices, but the underlying processes that were occurring, that may not have been visible in practice, but contributed to the emotional climate of the centre. The main aims of the centre were the normalisation of te reo Māori and tikanga, strengthening the connection with the whānau so that te reo Māori is transferred to the home setting, and prioritising wellbeing, both physically and emotionally. Strengthening the connection with whānau was seen as a pathway to facilitate, not only the use and acquisition of te reo Māori, but also to strengthen the sense of belonging, the feeling of being in it together, and sense of achievement, respect and connection to one another. This was done through the poutama, whakapapa, Facebook and karakia displays, all of which are created by the centre and included the images of the tamariki. This is a more holistic interpretation of the linguistic landscape than that found in previous research, and it opens opportunities to enhance the linguistic landscape with the aim of strengthening the needs of those in the waka, physically, emotionally and intellectually, so that the waka can move forward more quickly.

Linguistic landscape is a significant field of research, especially in a New Zealand for the revitalisation of te reo Māori where research shows (Macalister, 2010) that the percentage of speakers of te reo Māori is underrepresented in the linguistic landscape in a location representative of middle New Zealand. Shomany and Waksman (2009) write,

Thus, we present LL [Linguistic Landscape] not only as a significant tool for documentation and inquiry but also as a powerful vehicle within a framework of critical pedagogy, activism and language rights (p. 314).

As Macalister (2010) suggests, corporate and municipal policy may require some change to ensure the official languages of New Zealand “and the communities who speak them gain a voice” (p. 74). Recommendations for future research in linguistic landscape research would be to include the cultural imagery that contributes to the linguistic landscape. The visual presence of particular cultures through cultural imagery, especially in an ECE setting, may contribute to the communication of power, language use, sense of belonging, identity, concepts, ideas and narratives. This research was set in a Māori immersion ECE setting. Future research could be set in mainstream ECE centres, with not only attention on te reo Māori within the linguistic landscape, but including the multi-cultural content that reflects the growing multi-cultural population of New Zealand.

This thesis contributes to the field of linguistic landscape research in New Zealand and to strengthening the voice of te reo Māori speakers by illuminating the underlying processes and interactions that are occurring in the interacting environments of an immersion ECE centre: the centre, the children’s homes and the centre’s online presence. It aims to highlight additional elements that may be considered to strengthen and enhance the linguistic landscape, such as the personalisation and use of *kanohi ki te kanohi* to strengthen the waka of needs, for both bottom-up and top-down producers and policy makers. The waka of needs is introduced here as a model to use for shaping and enhancing the linguistic landscapes. It supports the underlying processes for te reo Māori as it supports physiology, safety, connection, esteem and self-actualisation as a whānau. The waka of needs may be an emerging consideration for te reo Māori in the linguistic landscape, as based on the aspirations of the self-actualised and meeting the needs of the individuals to the depths of their physiologies. Dr Rangimarie Pere’s words at the beginning of this thesis refer to te reo Māori as helping to give sustenance “to the heart, mind, spirit and psyche.” The research in this thesis has demonstrated how this linguistic landscape, and the underlying processes that are connected to it, can touch that depth of sustenance too.

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